THE QUARTER ACRE GARDEN

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By

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The photographs on pages 41, 42, 59 and 77, and the lower photographs on pages 60, 78 and 95, are by Reginald A. Malby & Co

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CHAPTER I

THE PRACTICAL APPROACH

How to make and manage The Quarter Acre Garden is the theme of this book, and since you have opened it to read these words, you must be interested. Most of the following pages deal with the subject objectively, but in this first brief chapter I want to suggest what should be your attitude towards the project, reveal some of my own opinions and try to engender the right atmosphere.

There is an old country saying: "There are only two ways of doing everything—wrong and right—and wrong always comes first." One transient thought about the clumsiness of the average recruit in any profession, trade, occupation, or sport, is enough to see how true that old saw is. In gardening, it is so easy to waste a lot of money and time, and to make mistakes that stare us in the face for years. If you remember this you will understand why much of the advice in this book, founded upon knowledge and experience, is somewhat harsh and direct.

"Oh, but you're an expert" exclaims the visitor to the garden, or the viewer of an exhibit at a flower show, unjustly insinuating that people like myself possess untold secrets. The only difference between the professional and the beginner is that, whereas the professional is only satisfied with results, the beginner is inclined to be content with the personal effort, regardless of the outcome. It is most necessary for the man or woman who gardens in leisure hours to do everything the right way, and to have the right attitude, for here is no time to make foolish mistakes. "Efficiency" is not a gardening word, but "The Right Method" must always be the keynote.

The basis of my own gardening is working with Nature. If Nature is welcomed as a partner, and her laws heeded,

the garden is generally satisfactory, while it needs a minimum of attention in such problems as dealing with pests or doctoring invalids. But if we ignore Nature, or try to dodge her insistences, the outcome is disappointing. This applies when making a garden as well as in the cultivation.

Soil

Think of the soil in your plot as being alive, as it surely must be; pulsating with myriads of micro-organisms that live and die at an amazing pace; converting the earth into the perfect state for the garden occupants to live in. If there is a paucity of bacterial life the soil is poor. If there is an abundance, there is rich fertility. Remember that these micro-organisms, at least the friendly ones (the red corpuscles of the earth, as it were), flourish where they can get plenty of fresh air and unlimited decomposed materials to live upon. Too much clay or sand, wetness, or dryness, excessive acidity or alkalinity, or abnormalities of any sort, check the population, and consequently, starve the plants and trees. This subject is so profound that many books have been written about it, but there is no need to worry about that. All that the gardener of The Quarter Acre need do is feel aware of this state of affairs, and endeavour to cultivate the soil to bring about and sustain the happy mean.

Of course, there are exceptional plants that demand exceptional conditions, such as the Cacti of the desert, or the Water Lilies of the ponds. Also Rhododendrons, some Lilies, and a few other plants prefer a state of unusual acidity, but they are the oddities to be ignored at this stage. While nearly all plants have their soil preferences, the vast majority respond to a general treatment which we will make our chief concern.

This leads to digging. It is just as essential to dig for Beauty, as it is for Victory. This most irksome of jobs, to the amateur, must be faced squarely, and tackled properly, in order to get the best results from the garden. Too often is it left until spring, when the operation is only half as effective as it is when done in the late autumn or early winter.

This is especially so in heavy soils, that are more widely spread than sandy, chalky, or gravelly ground. I have purposely devoted some space to the technique of this operation in a later chapter because it is an essential subject, but here it should be explained why early digging is strongly advised. Firstly, it can be done by degrees, and is less tiring than when rushed. Secondly, heavy soil should only be dug when it is moderately moist. If handled when too wet it clods up, and becomes unmanageable. Inversely, it is too hard to dig when dry. The autumn stage is generally right. If roughed up then, so that the maximum surface is given, the subsequent frosts create flocculation, i.e., break up the mass into small groups of particles; thus making it easy to fork and rake into a tilth in the spring. On the other hand, if digging is delayed until spring, there is not time to do it properly, the soil does not settle down before planting and so causes damage to roots, while the disturbed soil will dry into hard clods that break your back and heart.

But in exceptionally light soil, it is unnecessary to have much flocculation, and the chief concern is to conserve goodness in the ground, for rains will wash it out where there is too much looseness. So, in this case, digging is done in the first months of the year.

That is one example of working with Nature.

Another is to grow plants that thrive in the local sort of soil. Although the vast majority need identical soil cultivation, they differ in their individual tastes. Some like a clayey texture—but not pure clay. Some like a light texture—but not pure sand or gravel. We should find out the preferences by studying catalogues that state them, before sending in the order. An observant walk around the neighbourhood will also reveal much in this respect. Good gardeners are watchful and inquisitive people.

Another injunction is not to "fall for" many expensive novelties, particularly new varieties of such things as Roses and Sweet Peas. A few are permissible, perhaps, knowing them to be gambles; but in a year's time they either become cheaper to buy, or are casualties—most often casualties.

In short, gardening chiefly consists of reasoning out your own problems, based upon broad principles. The practical approach is the only way to make and maintain a small garden in leisure hours. Reason out the practicability of every applicable suggestion heard over the radio, or printed in the Saturday newspaper; or in the following chapters. Then you are bound to succeed.

CHAPTER II

PLANS

The owner of an undeveloped Quarter Acre Garden will probably have a lot of ideas about how it should ultimately look, and what should be grown, the great headache being to get the job under way successfully. He, or she, will have to be the surveyor, designer, contractor, foreman, and labourer, all rolled into one. It is exciting being all these things—one at a time. It is too hectic and muddling to strive to be all at once. Take the role of each in turn, and while dealing with one aspect of the whole job, exclude the rest as far as possible. Modifications can come later.

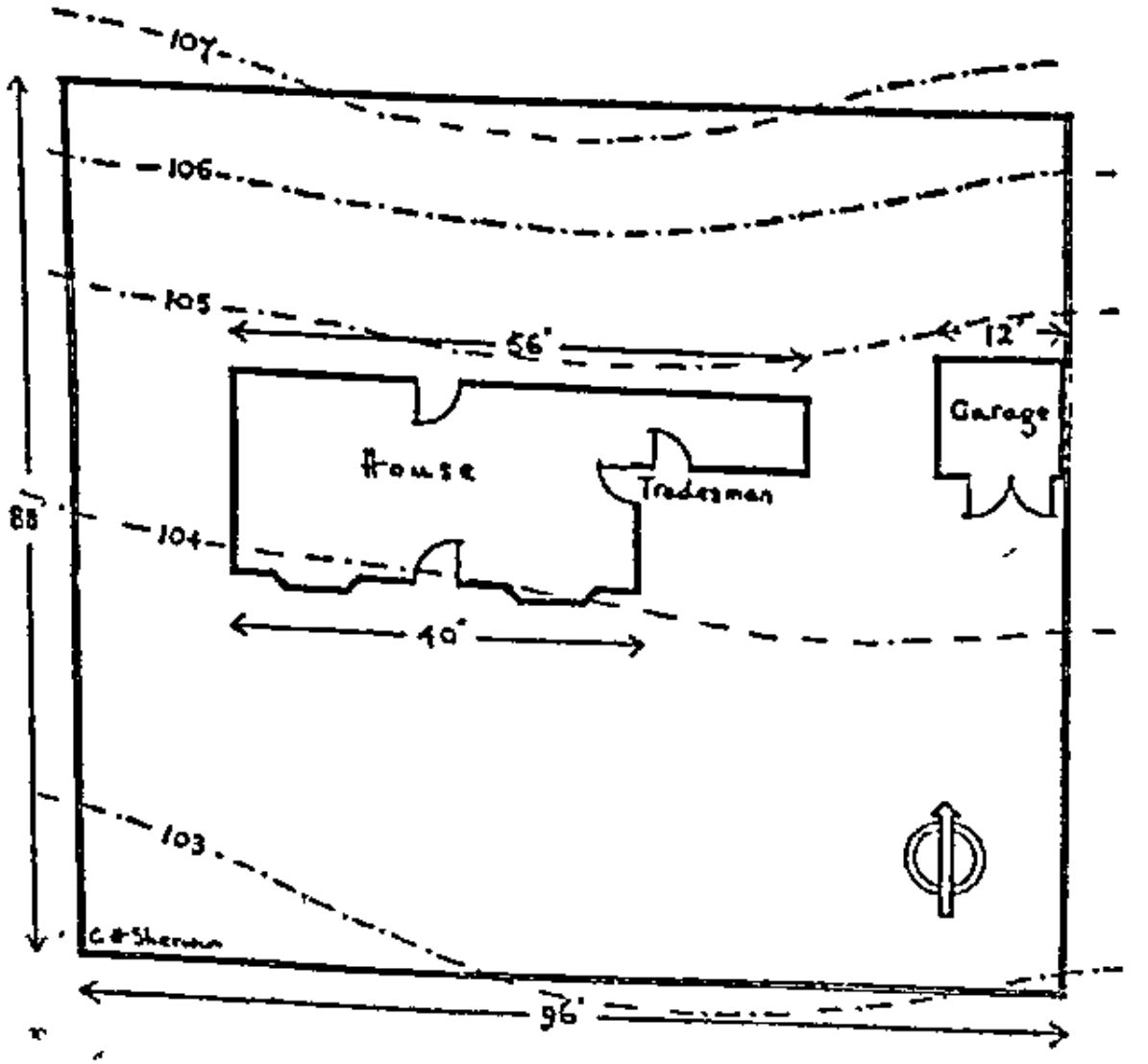
For example, the first task is to survey the plot. Proper surveyors not only draw a skeleton plan, they also give side views of levels. The latter is hardly necessary in a small garden, although it is a first rate start to draw a flat outline, putting in the boundaries, the house, the ground floor entrances, and the important windows. It is not very difficult to do. If a sheet of squared drawing paper is obtained a scale outline can be marked upon it very easily. As you know, some drawing paper is marked off into deep-lined 1 in. squares, and subdivided with lighter lines into 64 partitions, each being $\frac{1}{8}$ in. square. If each tiny square is deemed to be a square foot we have the scale diagram at $\frac{1}{8}$ in. = 1 ft. This is large enough to fill in many details, and will be clear enough to give a sense of proportion, as well

as be a guide to work to when you exchange the role of designer for that of foreman.

Perhaps the best way to show how to plan a garden is to give a few examples.

In the first one, then, we will assume that the house is situated approximately in the middle of a site upon a sunny slope, the frontage being low and facing due south. We start by measuring the boundaries, which we find to be 96 ft. along top and bottom; 88 ft. down the sides. Next we place the position of the house inside this nearly square frame, and then mark off the main ground floor doors and windows—as in Diagram A.

DIAGRAM "A".



There is really no need to show the slope, as has been done, for we are aware of it all the while.

Designing Plan A

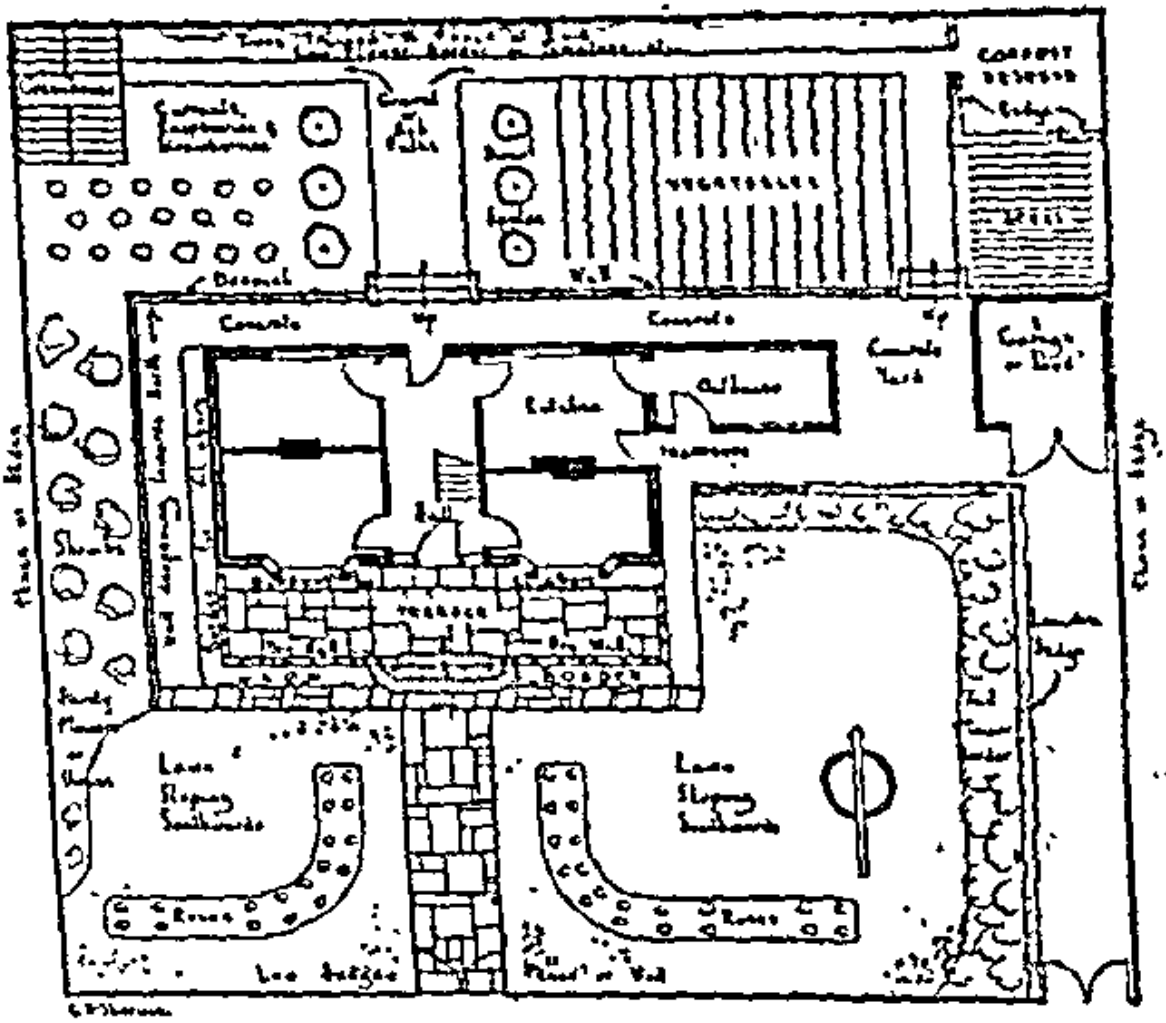
Now forget being the surveyor, and become the all-important designer. While filling this role you will bear in mind your previous intentions to incorporate several features within the scheme—if you can. Perhaps they comprise—a place for Vegetables and Fruit; a small Herb garden; a small Shrubbery; a Hardy Flower Border; a good Lawn; some Bedding Roses; some Climbers upon the walls; and, ultimately, a small Greenhouse. If these are borne in mind and the plan studied, the positions for some will be most apparent. There may be positions that simply shout for something that you had not thought about. In this plan, for instance, the "falling" ground in front of the house *almost demands a terrace.*

Anyway, after spending an hour or two upon the diagram you could have produced Plan A.

Looking into the details of this plan, and checking to scale, you will see that the terrace is 8 ft. wide and is the exact length of the front of the house. Steps lead down to the main path, the latter being 8 ft. wide, and paved similarly to the terrace surface, thus being in proportion and conformity with the general appearance. The retaining wall of the terrace, is only marked on the plan, but its face, 2 ft. or 3 ft. high, consists of pieces of paving of the same nature laid on the Dry Wall principle, enabling plants to be inserted in the crevices, and along the top. There are also narrow paved paths running on either side of the steps to meet the footways around the rest of the house, but there is a narrow border between the wall and these paths, for planting purposes. This narrow border is extended up the wide side of the house wall, for climbers and "foot plants."

The paths on the east, north, and back half of the west walls of the house are made of concrete. Remember that they are below ground level, and there has to be a retaining wall

PLAN "A"



to hold up the kitchen garden that is a few feet higher than the path, owing to the rising ground. The rest of that part of the plan is self-explanatory.

In the front, the shape of the Rose beds may arouse criticism. If you visualise the position from the bay windows, it is plain to see that their beauty is enhanced from those angles. Furthermore, mowing the grass is facilitated by the curves. These beds are 4 ft. wide and will take two rows of bush trees comfortably.

The seemingly large bit of lawn in front of the hardy flower border is intentional. The lower end of that border can be seen from the windows, but its fullness is most appreciated by an unimpeded view when standing on the terrace.

Its background of Lonicera hedge or Yew will improve its appearance, and also make a clear-cut demarcation from the main part and the side entrance.

Plan B

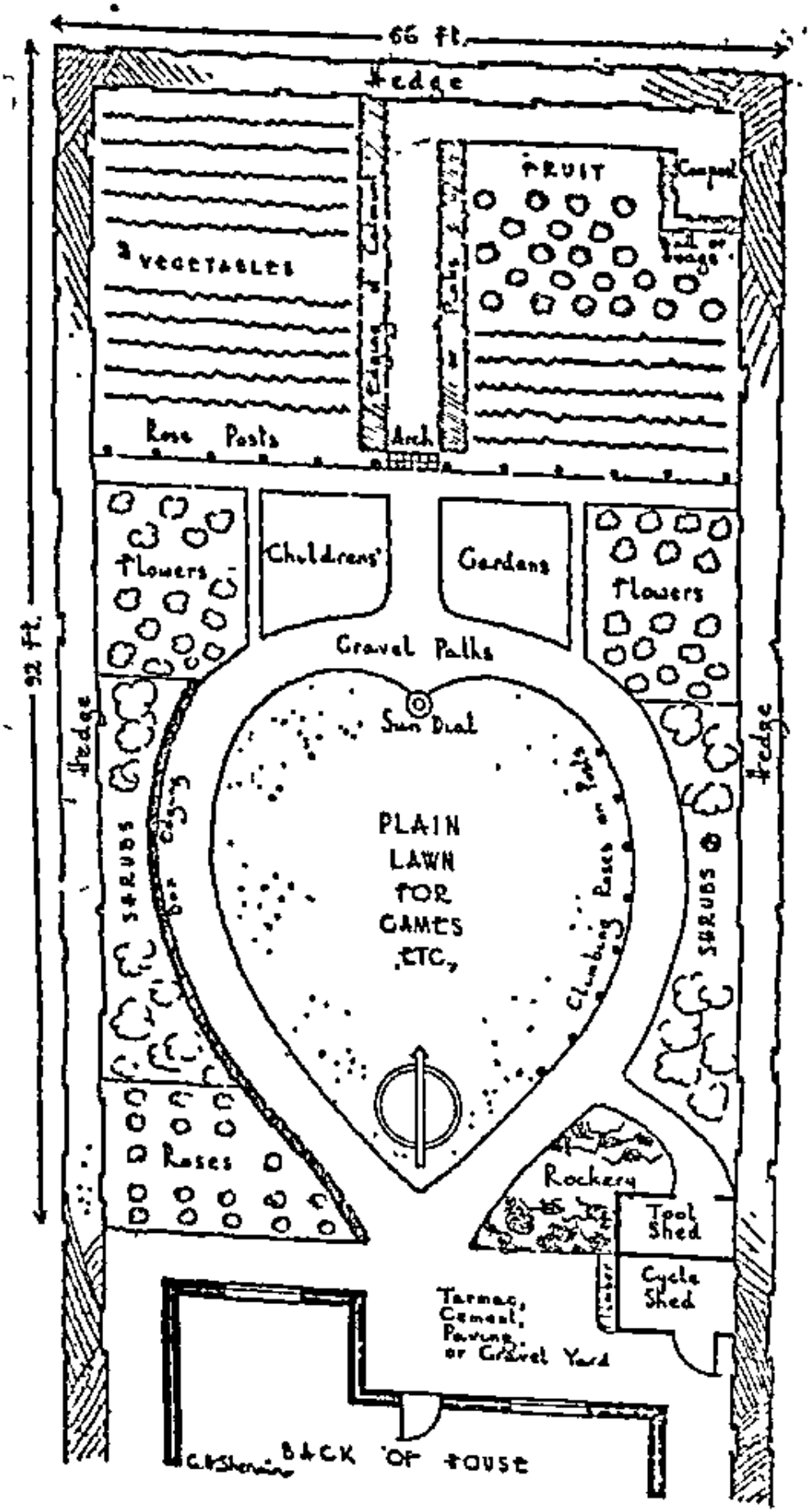
The site for Plan B is a common one. It is oblong, with the detached house filling the forepart, except for a path upon each side leading to the back. At the back of the house the garden extends to a depth of 92 ft. and is 56 ft. wide. The occupants are two garden-minded parents, and their two children who would be like them. In fact, we have the Happy Gardening Family. We must plan accordingly. Each will have their own special parts of the garden, while there must be one place where all can entertain or play. After a little imaginative study, Plan B is produced.

The heart-shaped lawn is the chief feature. Its originality will fascinate visitors, and its large open space will not curtail enjoyment, as when fragile flower beds are placed within the framework, or are in close proximity. Furthermore, there are safeguards against garden damage in this scheme. On the right are Climbing Roses on posts that give warning to keep within the lawn boundary upon that side, while on the other, the Box edging upon the left hand side of the path will stop trundling balls from rolling into the Shrubs and Roses.

The children's gardens are in a prominent position, being within view of the windows, near "Mum's Flowers," and Dad has to pass them every time he goes to his utilitarian part. This will have a subtle effect upon endeavour. The children should do exactly what they want with their own gardens, and only be helped when they ask for it. Their ideas will often set YOU thinking.

A garden of this sort is not very expensive to make. The chief items will be the lawn and the paths. But, the biggest job will be the preliminary preparation of the soil.

If the garden is bare at the beginning it should be trenched from beginning to end, by the method described in Chapter 9.



PLAN "B"

SOIL FAIRLY FLAT AND ORDINARY.

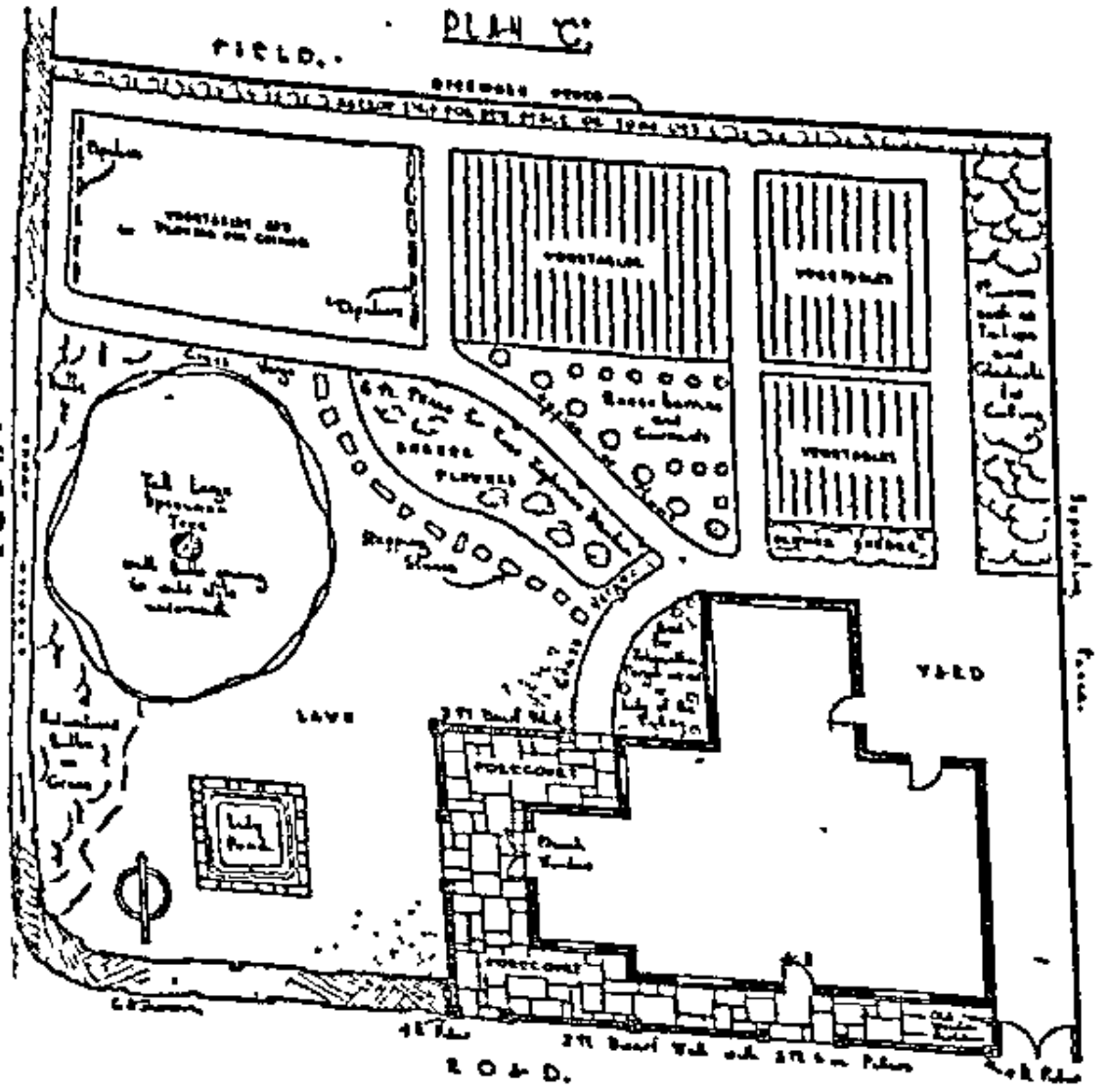
Patience and powers of persistence will be tested, but if all the family is keen the result will be joyful and lasting.

After the trenching and the period of settling down again, the paths can be laid, the lawn made in the prescribed manner, the hedges inserted, and the various plants and trees introduced by the various members of the family—in their own domains. It should take about a year to do it thoroughly. If taken over at Michaelmas, the trenching could be completed right away. Then it could be limed—if necessary. In the spring, when the soil is workable, the hedges could be planted and the paths laid. The vegetable and fruit garden would be ready for cropping, shrubs and flowers can be planted in March. That left undone would be the lawn and rockery. The last would be left because of lack of time, while the lawn must have a further chance to settle down before the final levelling, it being in a perfect state for sowing seeds at the end of that summer.

Plan C

In this plan the house is in the corner of the Quarter Acre. It is an old house, in fact, almost a cottage, and was built in the days when roads were narrow, so that now its front door is only 4 ft. from the road. A previous owner had "improved" its amenities by adding a lounge with French window upon the garden side, but had never re-planned the garden itself to conform to the new conditions. There is one grand specimen tree at the far side, which simply must be retained and incorporated in a new layout. The hedge, consisting of Quick and Privet, is not in bad condition, it being the plan that needs some drastic attention. Fruit, and vegetables are wanted for the household, and flowers are welcomed for indoor decorations. A lawn and a pool are desired. One result would be Plan C.

This plan is intended to point out the difficulties of bringing an informal plan into formal surroundings. Here it is possible to have a mixture because the established hedge and the large tree are already in existence. It is a happy blending.



Whereas, in a site that has to be laid out from scratch it takes so long for large trees, or shrubs, or hedges, to develop and hide the incongruity. It is far better to adhere to formality in a completely new garden than strive to introduce winding curves and unnatural bends just for the sake of originality. It never looks right, somehow. But we can plant trees and shrubs in a formal plan that will grow and create an informal adjustment later. Paths will have to be side-tracked, and allowances made for the increasing fulsomeness. However, in most cases we have to reckon with a square-ended house within a square-ended garden. The corners can only be rotted out with the passing of time. All things considered, the best attitude to have is to consider the garden as an extension of the house. Divide it into rooms, so to speak,

and then vary these by treating each one differently, plants and ornamentations being the furniture and fittings.

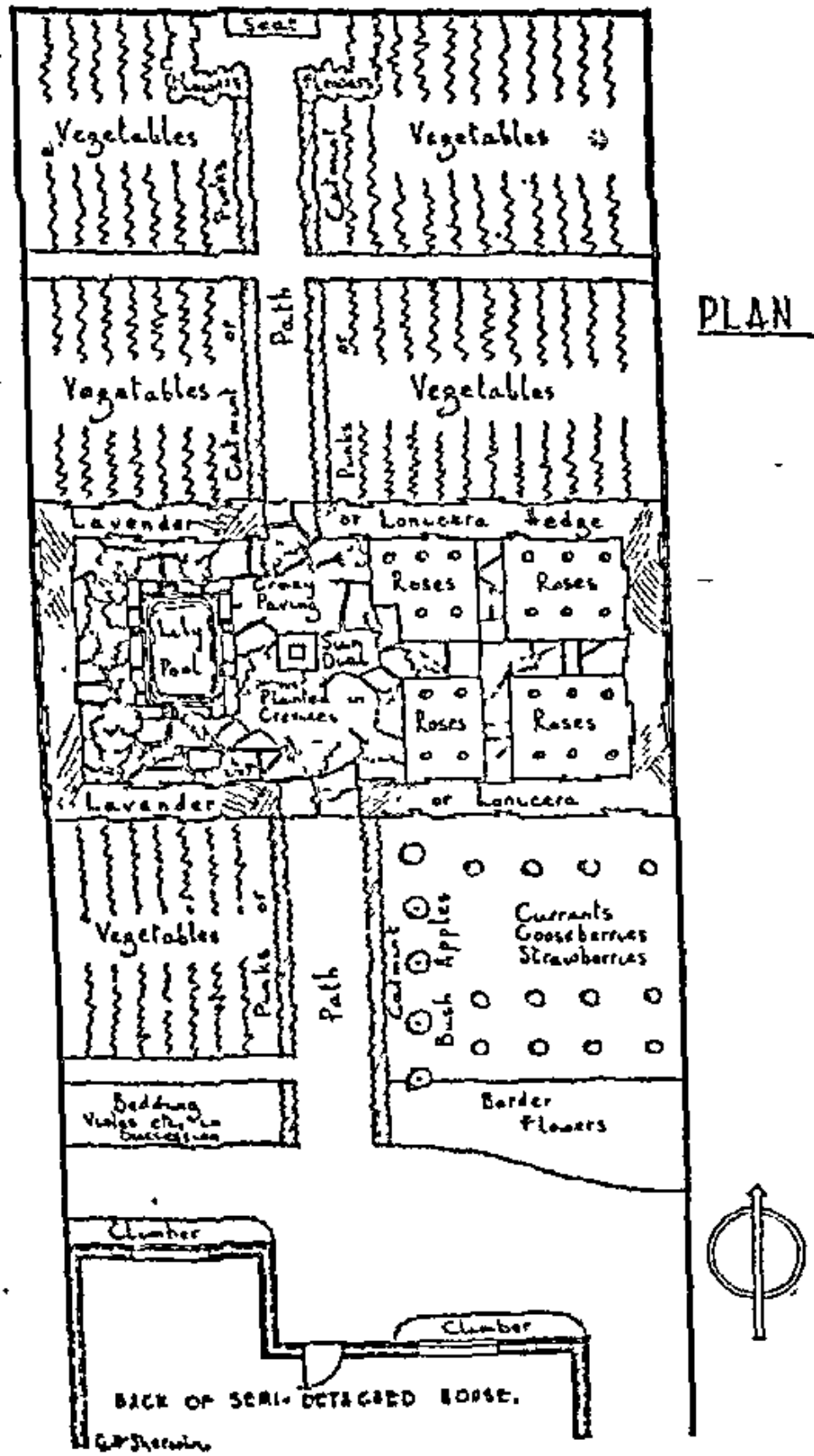
There is one feature in this plan worth special notice. The forecourt around the French window and the narrow strip in front of the house are bounded by a low wall strengthened by pillars. This wall should be built of stone boulders and left partly hollow in the middle to hold soil in which plants like Aubretia, Valerian, Stonecrops, Houseleeks, and Wallflowers will grow. This is one of the most attractive means of getting away from the stereotyped wall, or fence, or wall with fence perched on top. It solves a dire problem.

Plan D

The small rectangular plot of the semi-detached house is one of the worst sites to deal with. Unfortunately, it is also one of the commonest. The owner generally wants to devote a large part of it to vegetables and fruit, but would also like to get away from that path-up-the-middle-of-an-allotment look. One way to do it is to devote the middle part to a surprise feature, but retain the narrow path that will accentuate its length. To accentuate the peculiarity of a plot is one way of adding to its interest. In this case, Plan D reveals the idea of giving length, which is wonderfully effective if edged with some suitable subject, such as Catmint, or something similar. (Photograph No. 7. is an example of what Mrs. Sinkins Pink will do.)

It is most probable that none of these plans will suit any particular garden. It is not intended that they should, but they ought to depict the sort of problems and viewpoints that arise in the planning of others. It is possible to make several changes in each of these without altering the main scheme. In Plan D we can put a sunken garden in place of the Lily pool. A lawn can be laid where the vegetables are to go between the Lavender hedge and the house. In place of Lavender, we can plant Yew or Rosemary, or Berberis.

But the things that cannot be altered to any degree without upsetting the whole layout are the paths and hedges. If


Seat
Vegetables
Vegetables
Path
Vegetables
Vegetables
Lavender
or Lonicera
Hedge
Roses
Roses
Crazy Paving
Lily Pool
Sun Dial
Roses
Roses
Lavender
or Lonicera
Vegetables
Path
Currants
Gooseberries
Strawberries
Bush Apples
Border Flowers
Clumber
Clumber
BACK OF SEMI-OCTAGED BORDER.

PLAN 'D'

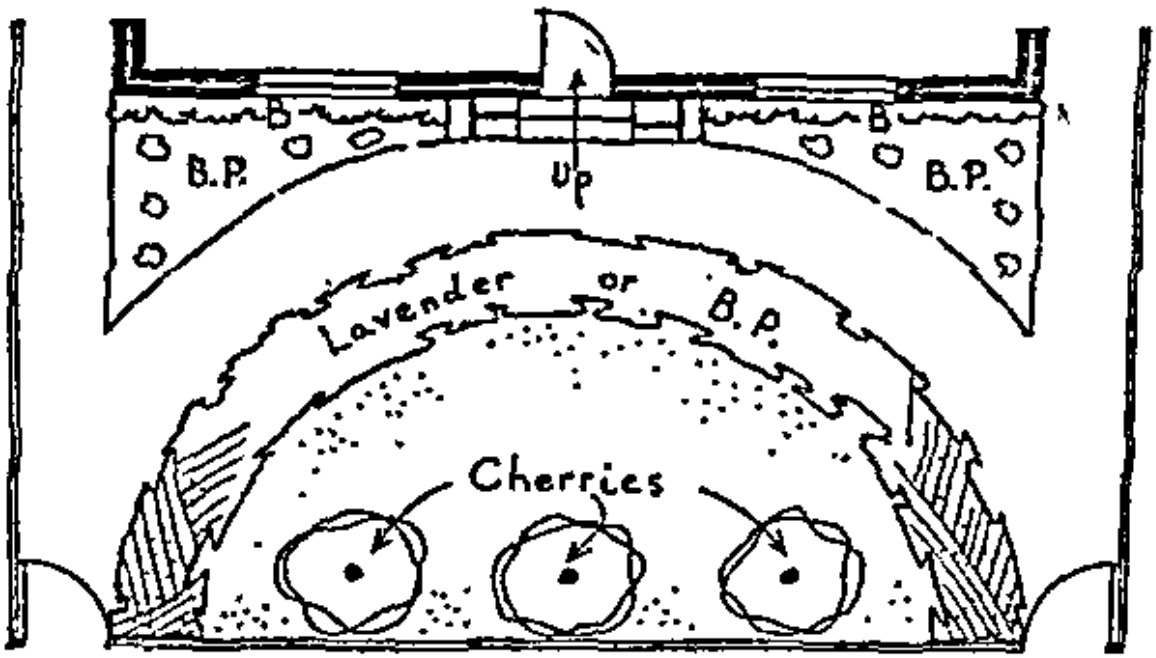
these are right, the details can be varied to our heart's content.

Front Gardens

In two of the plans so far reviewed we have seen how to deal with the large front garden, and the merest strip. Far more common are those almost rectangular fronts entirely segregated from the major part at the back. So restricted and so stereotyped are they, that a novel treatment is welcomed, whenever possible.

A bold outline is the best policy. It should be of such a type that it is always neat and tidy, suggests hospitality and *looks nice from both house and road. It is none of these* things when surrounded by a tall wall, fence, or hedge. If there is to be a hedge have a low one. If there is to be a fence,

PLAN "E."



G.E. Sherwin.

B Border.
B.P. Bedding Plants.

have one that is pleasing in design and light in structure. If there is to be a wall, the low rustic sort that will accommodate plants will satisfy your taste, will keep out intruders sufficiently and will not be any more attractive to wandering dogs than ordinary gate posts.

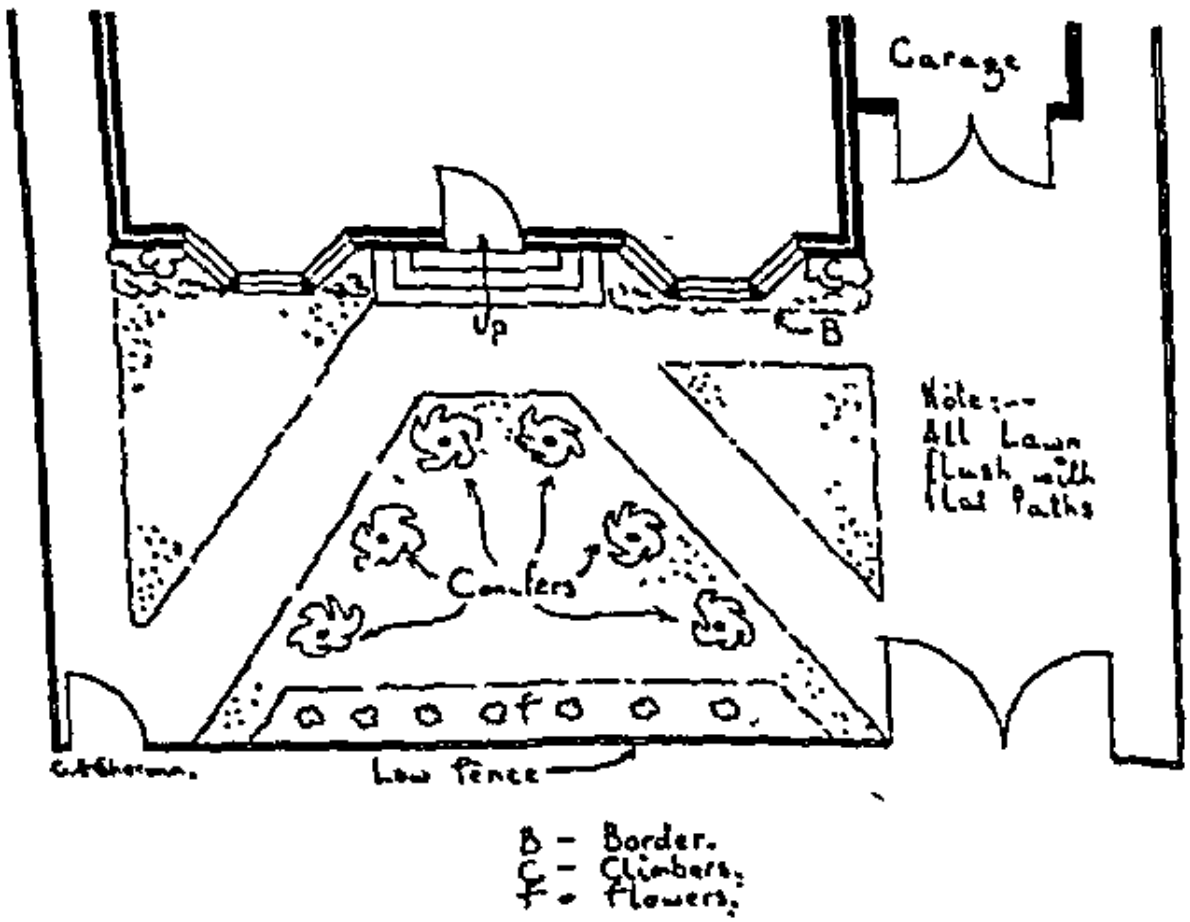
The open front with side entrances, on the half-circle system, can look very impressive, and there are several ways of "ringing the changes."

We have one example in Plan E.

It will suit any house with a streamlined façade, for it echoes that characteristic.

The Lavender hedge, or formal beds will stop any temptation to take a short cut across the lawn, while the neat Cherry trees in front will be in symmetry with the pattern.

PLAN "F"

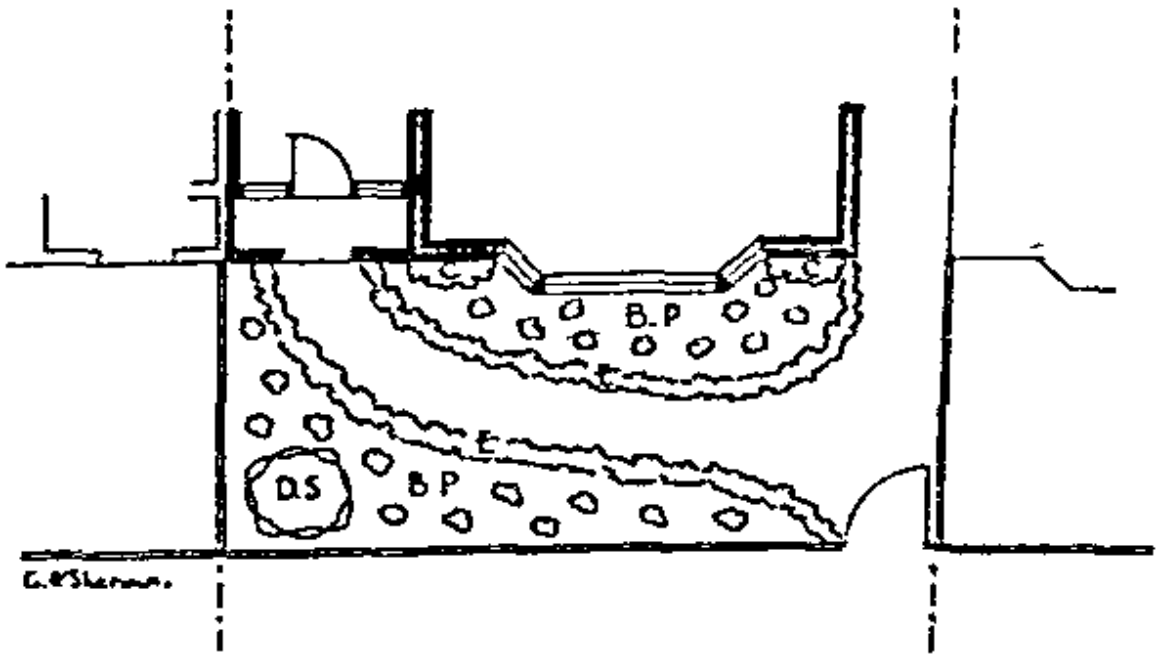


Where bay windows are prominent the inverted V style may be more suitable. This can be "lifted" by planting neat columnar conifers, such as Irish Junipers, where marked in Plan F.

If nothing but grass and conifers are planted on the flat and Pyracanthas are trained against the wall, this front is Ever Green. (Not just evergreen !)

Where the dual-entrance style cannot be adopted, the broad path approach guarded on each side by a raised bed, or rockery suggests warmth and generosity. This point is illustrated in Photograph No. 5. It is colourful most of the year and neat at all times. This type of entrance needs a little heavier gate than usual, but it should not be high. That house door does not make you feel that you are entering another world, but merely leaving one room to walk into another, whichever way you are going. There is no suggestion of a bizarre effect. There is homely charm and, above all

PLAN 'G'



C - Climbers - Pyracantha
E - Edging - London Pride
DS - Dwarf Shrub - Viburnum, Berberis or Spiraea.
B.P. - Bedding Plants.

virtues, it is the one to aim for when planning the garden, no matter where it is.

How to change the usual style of that small square in front of a semi-detached house is shown in Plan G. The gate leading to the door has been "sealed off" and the paths planned to make the side-entrance important. Shrubs or bedding plants will be seen at their best in this pattern.

CHAPTER III

ESTIMATES

Having settled the general design, you should now assume the role of contractor and strive to get an idea of how much it will cost to complete the job. It will depend upon these things whether you proceed in grand style, or work along the most economical lines.

When forming estimates it is well to anticipate that there will be unforeseen expenses, but, although they may be formidable, they should not make it seem insurmountable. If the plan is formulated correctly and adhered to within reason, the development can take place piecemeal, and will cost less than when it is just a haphazard affair.

STONEWORK

In Plan A, to which we will refer to help you arrive at your approximate figures, the most expensive item is the terrace. It involves the use of paving stones, crazy paving, bricks, or cement. Then there is the soil that will form the interior of the terrace. If that which is moved from the immediate surround of the house at the back is barrowed to the front, it is just the expense of moving it.

But the paving—that's the problem. We can, nevertheless, work out the quantities needed, but the cost can only be ascertained by seeking out quotations from local builders, or

builder's merchants. They will quote by the ton—delivered.

A ton of Random Rectangular Paving will generally cover 90 sq. ft. (10 sq. yards) of surface and, seeing that the part of the terrace to be treated approximates 270 sq. ft., three tons are necessary.

Likewise, there is the main walk to the gate and its measurement must also be ascertained upon the same lines.

After that we have the dry wall of the terrace to measure up. As broken pieces, that we use for this, have to be laid upon each other flatly, it frequently takes a ton to build 36 sq. ft. (4 sq. yards) face measurement of the wall. Therefore, reckoning that the sides of the terrace are 8 ft. across, while the front is 40 ft. long, and the height is 2 ft., a total of 112 sq. ft. is arrived at, and so we shall need about 3½ tons, if we allow a little extra for the steps.

This may prove altogether too expensive with good stone, so we must look for alternatives. Crazy Paving, especially the "thin" type, will cover half as much again, therefore two-thirds of original quantity is needed. It will be cheaper too. Even then, it may be too expensive or impossible to obtain.

Bricks

You may like to use bricks for the terrace, the front pathway, and the retaining wall around the back of the house. If you did this you would probably get it done by the builder, or at least strive to get the same sort of bricks as were used in the house fabric. However, if you preferred to try your hand at bricklaying, you can reckon that a 100 square feet of a path will require 357 bricks if they are laid flatly, or 560 if laid side-edge upwards. For a regulation wall 9 in. thick, twice that number is wanted. Bricks, if you can get permission to obtain them, are about £7 10s. at the kiln, a further charge being made for delivery. And they will need cement and sand to bind them together.

There is still the possibility of using only cement and concrete. It may sound uninspiring, but it is feasible—to

make all shapes of artificial paving, including "crazy" that is hardly recognisable as such. Colourings can be added to the mixture and it can be dressed afterwards with soot water to give the old appearance.

Anyone interested in this should write to The Cement & Concrete Association, 52 Grosvenor Gardens, London, S.W.1, and ask for the gardening leaflets. These are free and there is no obligation to get the cement, or the ballast and sand from any particular source. These leaflets tell how to build terraces, steps, paths, pergolas, lily ponds, walls and even give plans of gardens. We are also shown various patterns of paths and the amount of materials to make them. There is advice upon the mixing of the various ingredients for each special purpose, as well as a detailed description of the procedure.

My opinion is that crazy paving and concrete should be last resources. However, by studying these leaflets, measuring up the job to be done, and obtaining quotations for the materials from the local suppliers, you can arrive at a fair estimate.

Gravel Paths

The commonest path and walk material is gravel. This varies in quality and price, but the soundest way to find out about that is to consult a local road contractor. You will get addresses from a trades directory, or they may often be seen upon the vehicles used by road construction gangs. The right sort of gravel binds down firmly and will not "pick up" every time it freezes. If a clinker bottom is laid upon the bare earth, and then some finer ashes laid on that to form a foundation for the gravel, a covering of 3 in. should suffice. Gravel is sold by the cubic yard, and "a yard" spread 3 in. thick should cover 108 sq. ft. (12 sq. yards) of surface, although it will seldom do just that. When estimating, take into consideration the cost of clinkers and ashes.

There are other materials, such as asphalt, tarmac and granite, that are generally laid to order by experts. It is

also possible to have a proprietary dressing, such as Colas. In fact, I think that a path dressed with Colas, and then sprinkled over the surface with Pea Beach rolled down into the dressing gives a permanently refreshing appearance. Anyway, at the moment we are only trying to arrive at the cost. Search out the possibilities and get the quotations. It is worth it.

Hedges

If you have not already made up your mind about whether to have hedges or fences, it is well to study the various alternatives and allow for this expense. In a later chapter, I shall deal with the qualities of the various subjects, and the the way to cope with them, but in this one we will confine ourselves to the problem of outlay. Fences, especially *those made with good materials are almost unobtainable* at the present time, but when they are, they should be studied very seriously, and quotation obtained from a timber merchant. It is well to have them erected by the firm, it being more economical to do that, than waste materials doing it oneself.

Hedges are a different matter. These vary in prices according to the age of the plants, and their sorts. To help you to get an idea of how much these will cost you can reckon that most hedging plants need to be planted about 15 in. apart, in double rows thus :—

* * * *

* * *

therefore, for a hedge 96 ft. long, if we remember that one is wanted for every 7½ in. the least number required is 150. Actually, three or four more are strictly necessary, but we can space some slightly wider to make an even figure.

Privet plants 1½ in. to 2 ft. high cost 55s. 0d. per 100.
Lonicera nitida at the same height are 85s. 0d. per 100.

Quickthorn are 50s. 0d. Beech are 80s. 0d. Hornbean are 80s. 0d.: all per 100.

If taller, which means that they are older, the cost is much higher. The above figures are all for "transplanted" plants—a term meaning that the nurseryman has replanted them once or twice to improve the condition of the roots.

Yews are the most expensive of hedging plants. At 2 ft. high, they cost 78s. 0d. per dozen. However, they can be planted 2 ft. apart, in single rows. Comparing these with Privet, it can be seen that, whereas a 96 ft. hedge of the latter will be just over £4, the cost of Yews would be nearly £8.

More information about hedges is given in the next chapter.

Lawn Seed

There is no doubt that the most economical way to start a lawn is to sow seed. Turves are a prodigious price—if obtainable. Good seed costs about 4s. 0d. per lb. It is well to be liberal about it, and sow at the rate of 2 oz. per sq. yard. In Plan A we have about nearly 250 sq. yards, which means that we want at least 80 lb.

Other Costs

The above are the essential beginnings of the garden. After that, we have got to consider the costs of the various new inhabitants—Fruit Trees, Shrubs, Climbers, Roses, Herbaceous Plants and Flowers for the foot of the walls.

If you plant heavily at first, the expense is surprisingly high, but if begun modestly and pursued by degrees, and by raising some of the subjects from seed, a lot can be saved.

However, you can reckon that Rose bushes today will cost 3s. 0d. each. Those two beds will hold 5 dozen. Before the war, they were 6d. each. Perhaps it would be as well to eliminate the beds for the time being and wait patiently for the cheaper rates to come again.

Herbaceous plants are priced at 1s. 6d. each. Spaced at

2 ft. apart, that border in Plan A will hold 6 dozen. It will be rather thin at first, but these subjects grow and spread rapidly.

Rock plants, and other dwarf flowers cost 1s. 0d. each.

The average run of shrubs are from 3s. 0d. to 4s. 0d. each, but special sorts, such as the Large-flowered Lilacs, are more often 7s. 6d. each.

Climbers are about 4s. 6d. each.

Most expensive of all garden inhabitants, at the present time, are Apple, Pear, Plum, and Cherry trees. Standards are 15s. 0d. each. Bush-shaped Apples are 8s. 6d. while fan-trained Morello Cherries and most sorts of espaliers are £1 apiece, or more.

Currants, and Gooseberries range from 1s. 6d. to 2s. 0d. Raspberries are 6s. 0d. a dozen roots.

Those items, except for the greenhouse and shed, cover most of the constructional items in Plan A. Of course, there will be manures and seeds to get later, but these should be regarded as maintenance expenses, and do not come under initial estimates. However, there are still two most important commitments to consider—Labour and Tools.

Labour

If you do all the work yourself the cost of labour is easily solved, but I am convinced that help in the preparatory stage is worth every penny of the 90s. 0d. weekly that would have to be paid to a good man. If the ground is rubbishy, or poor, it will be essential to prepare it before anything else is done. It should be dug, or, still better, trenched from end to end before hedges are planted or paths are laid. At this stage it is possible to add food, give drainage, and above all make the whole workable.

Incidentally, less than an hour since writing these words I was in a small garden just taken over by a very efficient accountant, but an apparent tyro with the spade. In fact he was hardly using it. Instead, he had bought a lot of shrubs and plants and was surreptitiously putting them in

positions where he fancied they would look nice. An old countryman also in the garden looked at me and showed his disapproval by shaking his head. That man's new garden is going to be in a hopeless mess very shortly. I told him so. He said that he couldn't be bothered. If only he had spent half the amount upon the shrubs and plants and paid the remainder to a good labourer to prepare the site, he would have been wiser, the plants would be happier, and would have grown into a "garden city," instead of drift into a "bad tenement."

Tools

Good tools are a wise investment. The craftsman regards them lovingly. After all, they are but extensions of himself—as it were. In his hands they become a part of his body, and, being conscious of that, he values them as highly as he does his limbs. This may seem far-fetched, but I am a countryman and know how fussy and particular these men are. They will hide them so that nobody borrows them, and at the end of each day they will thoroughly clean each one, and "push over the oil rag." where applicable.

Unfortunately, like most things the best tools are difficult to get. For instance, a spade should be bright and shiny in all the steel parts, but now we can only get rough casts whose blemishes have been hidden over by crude paint. Do try to avoid the shoddy cheap productions and properly invest in things that are going to make you feel pleased with yourself every time you use them.

Approximate prices of good tools are :—

Spades 14s. 6d. to 20s. 0d. Forks 14s. 6d. Navvy shovels 10s. 6d. Mattock with handle 11s. 0d. (For grubbing out hard soil and roots.) Draw Hoe with handle 7s. 6d. Dutch Hoe with handle 7s. 6d. Iron Rake with handle 13s. 0d. Bricklayer's Trowel 8s. 9d. Garden Trowel 4s. 6d. Tape Measure 56 ft. long 11s. 6d. Spirit Level 7s. 6d. Hedge Clippers 9s. 6d. Grass Hooks 8s. 6d. Lawn Edging Iron 7s. 0d. Oil Can 11s. 0d. Rub Stone 4s. 3d. Garden Line 90 ft.

long 2s. 6d. Reel for line 5s. 8d. Water Can 9s. 0d. Secateurs 15s. 0d. Hammer 9s. 6d. Solo Sprayer 32s. 6d. Pliers 5s. 0d. Brooms 5s. 0d. Trug Basket 8s. 0d.

The larger and distinct necessities are the wheelbarrow, garden roller, and mower.

A substantial Wheelbarrow fitted with a broad rubber-tyred wheel costs about £9. 0s. 0d. If a garden is to be made it is definitely labour-saving, can be wheeled across lawns, or soil, without making marks or being bogged, and will last for years. One garden that I go in is fitted with ten such barrows on four acres, therefore one in a Quarter Acre Garden is justified.

A garden Roller is more of a necessity for the paths than for a lawn, although it serves both purposes. It does not matter about the quality providing the roller is smooth-surfaced and moderate in weight, in proportion to its size. When very heavy, but small, it is inclined to "drive" the surface, rather than flatten it smoothly.

A first-class Mower is judged by the number of blades upon the revolving cylinder. There should be at least six. The roller type is better than the skeleton shape. If fitted with ball bearings it saves a terrific lot of energy. Prices fluctuate, but good machines run to "double figures."

Incidentally, there are now one-horse Motor Hoes that will mechanise cultivation in the small garden, and small hand mowers can be adapted to be drawn behind them upon the lawn. There is a great future for this new departure in small garden management.

Comment

This chapter may have made you feel uncomfortable. But I have purposely piled on the possible costs of construction and obtaining the equipment to make you realise that you must be prepared to treat the garden as you would your other luxuries. When the cost of cars is thought about, and how much are the running expenses, as well as the depreciation, it is a consolation to know that garden outlay is an

investment. If there are errors in these estimates, they are over-charges. It is far better to work that way than not face up to facts. If the costs are less, it is a relief afterwards. In any case, they need not be incurred all at once. The point to bear in mind is that they should be anticipated.

Note.—Estimating costs of additional features are dealt with in future chapters.

CHAPTER IV

CONSTRUCTION

Just as the actual start in the construction of a garden may create misgivings, so has the beginning of this chapter caused me to pause over how to break the facts gently. You see, I know what should be done, but I am fearful to repeat it, lest your ardour is damped, or you may think me fanatical. However, I will be practical, rather than pander to any dilettante whims and insist that the importance of that preliminary trenching, digging, and enriching of the site cannot be reiterated too often. In a later chapter you will see how it is done, but, in this, we will assume that it has already been completed, and we are ready to proceed to the next stages.

First of all, where there is much soil shifting, it should be finished before any plantings are made. In Plan A the moving of the earth from behind the house to the terrace site is the first task. Then the terrace walls, the retaining wall at the back of the house, and the steps both back and front, ought to be constructed. After that, the garden can be levelled at the back where the fruit and vegetables are to go, while in the front, it is necessary to flatten the whole surface into that gentle slope towards the front fence. That done, we now have the right levels and know where to place the other paths, including the trade entrance. We can also plant the hedges at the correct depths. Once those are

settled, and having finished running over the garden where the lawn is to go, the bed for the grass seed can be levelled off. The Rose beds will be ignored for the time being, for they can easily be inserted in the turf later. That just about completes the main framework. After that, the introduction of Climbers, Herbaceous Plants, Shrubs, Fruit Trees, Plants at the foot of the terrace, Herbs, and Roses, can follow when convenient, within the seasonal laws. You will probably be too busy to worry about the Greenhouse for a long while, which doesn't matter very much.

The procedure for constructing Plan B has already been mentioned in Chapter 2.

The first job in Plan C is to construct the walls and floor of the forecourt. After that, the lawn should be levelled in order to get the correct height for the Lily pool, but the shell of the pool should be built before the lawn is finally firmed and sown. Follow this up by making the paths around the kitchen garden and planting the new hedge, as well as inserting the posts for the Roses. The rest of the work can be completed in any sequence

In Plan D, the paths are the first job. Then the Lily pool must be built and the paving laid. The hedges are so placed in this plan that they can be planted later without upsetting anything, unless it is the Rose beds. Anyway, the simplicity of this scheme is that only the paths really matter as far as sequence goes

In Plan E, the whole site should be levelled before the path is made. The Lavender hedge should be planted, as also should the Cherries before the lawn is seeded.

In Plan F, the whole secret of the effect is to have everything flat, therefore this should be carefully defined before the paths are laid. Then the Conifers can be planted, and the whole of the surface of the lawn smoothed off flush with the edges of the paths before grass seed is sown.

Marking Out

With a plan to work to, you are now the foreman, and

Here is a charming treatment of a very ordinary site in a common environment Paths, Pool, Rose Beds, Lawn and Seat are perfectly positioned, while beauty will be enhanced when the Hedge in the background hides the undeveloped land behind

A Dry Wall at the rear separated by a broad Path from the Rockery on the edge of the Sunken Lawn makes this garden individualistic Note how well the Shrubs are placed, and imagine how the site would look without them There is just a possible danger that these will over-grow

A perfect Lawn in an informal setting is the feature of this Garden Note the broad undulating Herbaceous Border, the Rocks in the background and the Circular Dry Wall around the old Tree The wall was built to keep the necessary soil over the roots at the original level—a method of surmounting such a difficulty without harming the tree

Here is a grand effect at the time the photograph was taken (June) This is nice where only a limited season show is wanted, but it is a fault where a lasting display is desirable The paved Path is planted with good, but unsuitable plants The Urn is well placed and enhances the picture

your job is to mark out the positions accurately. You will have your measuring tape in constant use, and some strong stakes are necessary to serve as guides that cannot be easily knocked over. If they are painted white you will be able to see how your theories will work out and you may feel inclined to make a few adjustments. If that is done, mark them on the plan so that there is no confusion. But before doing so, reason it out why, for example, in my sample plans, some of the paths are narrow, and some wide.

Paths

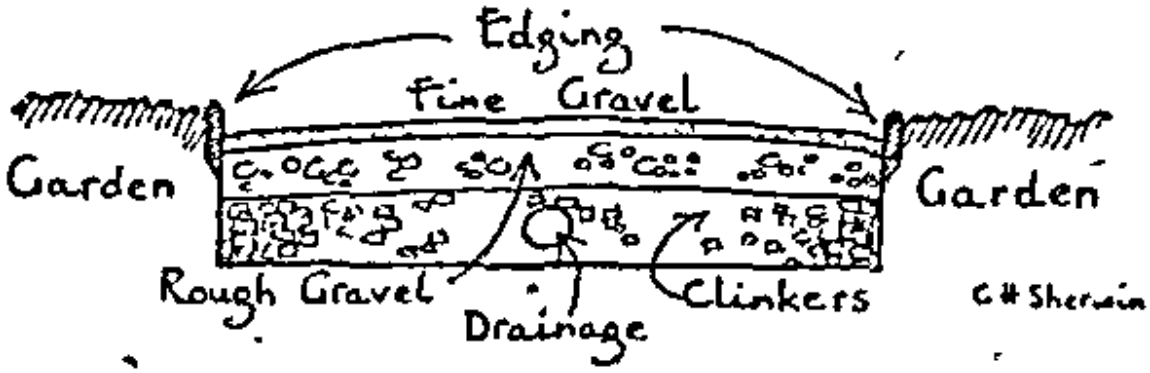
Paths that take you to some definite part of the garden should be wide and direct. If they deflect, or wind, there should be a real reason for that. Incidentally, it is a silly fetish to make a bend or a detour in a path for no apparent reason. Paths made that way invariably get the sort of treatment they deserve. The curves are ignored and ugly tracks appear upon the lawn, marring the whole appearance. In this respect, there is a weakness in Plan B. There will be the temptation to "take a short cut" across that lawn. However, to stop the likelihood of a track the sundial is placed where it is to break up the danger point. The only justifications for allowing such a weakness are the novelty of the scheme and the fact that it is to be a family lawn.

Where sidepaths are made, merely to form demarcation lines, or to walk along for gardening business reasons, they should be narrow. In short, paths should be made wide or narrow in proportion to their importance and usefulness. But also remember that width gives dignity, while narrowness inclines to give the illusion of length, often a desirable attribute.

The construction of a path is a straightforward job as long as you are precise. If it is to be done in paving stones or with "crazy" the leaflets issued by the Cement and Concrete Association will help you. Where gravel is used the foundation must be prepared, as for every other sort of

material. Drainage pipes must be laid too, if the site is very wet. (See Chapter 9.)

After the site has been marked off, the earth should be shovelled out to a depth of 9 in., the bottom rammed down hard, and the side walls (if any) fixed in position. Then place rough clinkers, rough gravel, or cinders over the floor between the walls and ram it down firmly. Over that spread smaller materials of the same kind and get the whole lot smoothed to within 3 in. of the top. On this sprinkle the surface gravel, preferably throwing it from the barrow with a shovel, instead of tipping it. Do this with the gravel in the dry state. Then pour on gallons of water, making it almost mud. Roll it down wet. The idea of this is to make it bind down without any picking up on the roller, as it would if wet on top and dry below. Once satisfied that it is spread evenly and bound down by pressure, keep off the new path for several days, so that it can dry out and "set" without disturbance. The result will be lasting.



A PROPER PATH.

The side walls of the path can consist of long thin boards secured to wooden pegs driven into the ground, or a brick coping can be made. In olden days, they used to have fancy tiles that have, quite rightly, gone into disuse. We often dispense with walls and merely build the sides of our paths against the adjoining earth. This is most satisfactory where we plant edging plants alongside, or have a grass

verge. Grass verges are in fashion. A strip of turf, 1 ft. to 18 in. wide is laid upon each side of the path to separate it from the flower border, or vegetable plot. But it generally swallows up too much space in a small garden. Notwithstanding, it is a form of construction to be considered in suitable circumstances.

Edging Plants

Where living edges are favoured the most suitable plants comprise Box, Dwarf Lavender, Pinks, Catmint, Thrift, Thyme and *Sedum spectabile*. There are other possibilities that need to be investigated. In one garden I used the blue Gentian, but it was only because that somewhat difficult plant would flourish in that particular soil.

Box lasts longest and is good providing that it is kept trimmed short and neat, but if neglected it becomes a harbour for pests. Lavender is lovely, but inclined to be straggly unless clipped immediately after each flowering season. Catmint gives a very long season of flowering and is most impressive, but it is inclined to die if tidied up in autumn. The dead growths must be left intact, more or less, throughout winter and be trimmed up in spring. *Sedum spectabile* is handsome and its neat rosettes of pink flowers attract butterflies during late summer, but it disappears during winter and spring—not a drawback unless you particularly want to see it then. Thrift is somewhat sedate, and most suitable for an edging in the kitchen garden. It needs replanting every second or third year, as do the Pinks and Thymes.

Hedges

As already stated, when studying the estimates, most hedging plants need to be planted in double rows in criss-cross fashion. When planting them I like to stretch the garden line down the middle of the double row, and have a piece of stick 15 in. long, notched in the middle of it. Each

plant is inserted the length of the stick from its neighbour, and half the length of the stick from the line. Holes are dug as the planting proceeds, the first one on one side of the line, and the next on the other, alternating them to the end. Consistency in distances and depth is assured that way.

Yews often arrive in with their balls of roots in sacking. I plant them without removing the sacks. This is extraordinary treatment, solely confined to them. All other plants need their roots to be firmly embedded in the soil in the orthodox way.

Hedging Subjects

Here are a few brief comments about hedging plants that may help you to decide which to choose, also taking into consideration the prices quoted in the previous estimates.

Cupressus macrocarpa has fallen into disrepute. It is not its fault. It is because it grows naturally to a height of 90 ft. and cannot withstand the torture of clipping. Can be planted 2 ft. apart in a single row.

Cupressus Lawsoniana, and *Thuya Lobbi*, are in the same category, only less so.

Yew makes the perfect hedge, but is poisonous to cattle. Plant 2 ft. apart in a single row.

Privets, both the narrow-leaved sort and the semi-evergreen oval-leaved variety, are the toughest of all hedging plants. They can be trimmed with impunity, grow rapidly, and do not become overwhelming. But they do want training properly in the young stage. If bought when 18 in. high and planted in the spring, in the next spring they should be shortened to 1 ft. This will cause them to bush out at the base and develop into a perfect hedge.

Quickthorn mixed in with Privet builds up the body of the hedge and makes it impenetrable. It is just too much of a good thing in small gardens.

Beech is lovely and can be kept in subjection where the soil suits it. In heavy ground the alternative is Hornbeam.

Hornbeam is one of my favourite hedging plants, but it ultimately needs a lot of room.

Laurel is often disparaged, but it is bright and cheerful. The difficulty is to keep it from spreading and it takes too much goodness out of the ground. Plant 2 ft. apart in a single row.

Japanese Spindle Tree (*Euonymous japonicus*) grows quickly and is good in seaside towns, but apt to be a misery nland. Plant 18 in. apart in a single row.

Lonicera nitida is very popular, and makes an excellent dividing hedge within the garden, providing it is kept clipped and the base is kept wider than the summit. A help to keep it shapely is to insert stakes down its middle.

Berberis stenophylla is sometimes used. It is pretty, but too prickly.

Sweet Briar; Cotoneaster; Holly; and Flowering Currant are often planted for the sake of novelty. They make excellent hedges in some places, but fail in others.

An observant walk around the neighbourhood will tell you more about the behaviour of hedging plants in your district than any book.

Select Young Plants

The chief blunder that beginners make is to think that by buying old tall plants they are making up for lost time. Most of these old shrubs with hardened arteries will merely stay stunted and look miserable, whereas vigorous youngsters will get over the moving operation quickly and grow away surpassing the others within a year or two. And much expense is saved.

Of course, all hedges need to be trained and clipped. At first, until the shape is determined, the chief task is to snip pieces off with a pair of secateurs. Then when the body of the hedge has developed, the clippers must be used as often as necessary. There is no definite date for doing this. Never let the growths get too strong, and when you do clip them do it in showery or dull weather, to minimise scorching. I

is wrong to clip too late in the autumn, for, if left all summer and then hacked off, early frosts will damage the exposed parts that are tender.

Should an old hedge get too ragged below and become top-heavy, cut it down drastically in April—if it is evergreen, or in late winter if it is deciduous.

Sometimes it will improve with feeding. There are special manures for this purpose. Or an occasional dressing with balanced fertiliser during showery weather, prodded into the ground alongside the stems, will "buck it up."

Lawns

The remaining chief task in garden construction is the lawn—where it is wanted. There is hardly any need to state that a lovely lawn is a great asset, but a weed stricken, or mossy, or starved, excuse of a sward is a depressing sight. Yet, I once again reiterate the importance of that initial preparation of the site. If the whole garden is trenched and tilled before the lawn is established the outcome will be what is wanted. No amount of doctoring will make up for that.

Supposing you have planted your hedges, and fixed the paths, and it is now spring—after the autumn digging, do not be in too much of a hurry to get the lawn finished off. Rather should the ground be trodden down, raked and smoothed over and prepared as though for an onion bed. Leave it like that all the summer—if you like. Or if you want to have "a bit of colour," sow seeds of annual flowers upon it. Candytuft, Scarlet Flax, Larkspurs, Californian Poppies, Clarkia and all those things that can be bought in coloured packets at the local bazaar, should be collected, all the seeds mixed together in a basin, and then sown upon the prospective lawn site. After you have levelled it off and got the surface firm and smooth, draw shallow drills right across it 1 ft. apart. Sow the seeds thinly along these and cover in by slightly raking. After the seedlings appear, thin them out drastically, and they will eventually make a show that will surprise you. If any weeds come up between the rows

they can be easily hoed. The only attention needed is this constant weeding.

The reasons for this strange procedure are three-fold. It will allow time for the lawn site to settle down, and so minimise the chances of future unevenness. The weeds that germinate through the summer can be eradicated and there will be fewer competing with the grass seeds. Late September is the best time to sow grass seeds, that will make a good strong sward before the next season's mowings.

Lawn Sowing

In late September, clear off the annuals, prod up the surface shallowly and proceed, once again, to tread and rake until the top is as flat as you want it. Check with spirit level and pegs if necessary. Do not use the roller at this stage. Tread the surface down systematically, and rake and tread again, until the right condition is reached.

Then sow seed. Only the best seed is good enough. There are firms that specialise in good seed. Ask the one you have confidence in to send you the requisite amount (2 oz. per sq. yard), and state the sort of soil you have. State that you want the best and "not a Rye-Grass Mixture." When you get your seed, mark off the site into yard strips, and divide the bulk into as many portions as you have strips. Use the garden line to measure off each strip and sprinkle the amount of seed as evenly as you can within the allotted space.

Having sown the seed fairly evenly, rake it into the soil surface. Do not put sifted soil on top as is often done. This practice causes the sprouting grass to lift the applied soil as though it were a carpet, and the surface is upset. On the other hand, when seed is scratched in with a rake, some of it is slightly buried and some is almost on top, and the germination is irregular and does not "lift" the bed. When raking is finished some of the seeds will still be exposed. That does not matter if the roller is now used, pulling it over

gently to press all into the fine earth where it will quickly sprout—if damp enough.

Birds may be troublesome, and it is well to put up scarers, or use netting. It is possible to get seeds that have been treated to make them distasteful to birds. The only thing against using such is that the choice is limited to those so treated.

Generally, if seeds are sown in late September, the resulting grass will need no further attention until spring. In spring, it will need the first cutting, which is rather tricky. Try the mower to see whether it will cut off heads fairly lightly without pulling out the roots. If not, the whole area will have to be patiently clipped over with hand shears. After the clipping, give it a rolling to firm the roots. Future mowings and rolling should bring about the desired result—a really grassy lawn.

One other important factor in the establishment of a lawn is hand-weeding during the first two years. This will not be as troublesome as it may sound—if persisted in. With a basket and a sharp-pointed knife the small sward can quickly be "gone over" and it will soon become so grass-packed that subsequent competitors simply cannot get hold. Dressing with lawn sand and such treatment is all very well for old decrepit lawns, but it should not be thought about in the early stages.

Once the hedges, paths, steps, and lawn have been constructed, the other features of the garden can be introduced without fear of making irretrievable mistakes.

CHAPTER V

FEATURES

1. Rock Gardens

A Rock Garden within the Quarter Acre can either be an artistic effort, or nothing more than a neat formation of

stones to show off brilliant plants. In the first way, the rocks themselves are the set pieces, while in the latter it is the flowers that must be most prominent.

Set pieces are constructed with weatherworn rocks that are made to look as if they had been in place for centuries and only the effect of time had exposed their beauty. This is easy to accomplish upon the sides of a bank, but more difficult where the surroundings are flat. Notwithstanding, it is possible to lay them so that they seem to have resisted the general tendency, and they may stand up, just as though they had only been uncovered by frosts and rain. It is all a matter of studying the stratification and good judgment in making them look natural.,

Weatherworn limestone is deep grey in colour and makes a bold rugged effect. There are variations of it, some being lighter than others, and it looks as if water has marked it. Two tons will be needed for an effort such as shown in Photograph No. 10. The present day price is around £5. 0s.0d. per ton delivered.

Then there is the Brown Stratified Limestone that is sold in large slabs and which will weather down nicely. It is generally cheaper than the real Weathered Limestone, but it must be remembered that the chunks are heavy and very few go to a ton.

There is also the Brown Hard Bargate Sandstone that is good for formal bank work. It will vegetate in time and be covered with moss and lichen. Its price is about £4. 0s. 0d. delivered

Another alternative is Grey Ragstone that will weather to nice shades after a while. It costs about £3. 15s. 0d. delivered.

If possible, small samples of these should be obtained, so that you can get an idea of appearances.

If you look at the illustration again, you will see better than I can describe how weathered limestone should be laid. If you can imagine this same stone projecting from a bank you will realise how much better it can look in such a situation.

When doing this sort of work myself I do not hesitate to

use a little cement to sit the stones upon to hold them firmly. The surface of the ground is made firm, the stones are placed in position, and then, once satisfied that they are right, are lifted away again, and a bed of cement laid for them to be finally sat upon. But much care is necessary to see that they are right first, for the slightest suggestion that cement is there mars the whole appearance, and once this stuff gets on to the stone it sticks like glue. Better not to use it at all, if there is any doubt.

Soil

The soil for such a rock garden should also be specially prepared and introduced. Nice silky sifted earth mixed with Bacterised Peat or screened leafmould, worked down in between the stones and piled and firmed where it is necessary will form a safe and sound rooting medium for practically all occupants. When rock gardens are made this way they are easy to manage—an important point.

Of course, plants must be obtained. A careful study of catalogues is necessary, and, for a rock garden of this sort, the choice should be of those plants that grow somewhat moderately. If one was completely ignorant of these it would be well to obtain a suitable collection from a reliable nursery. If you state your needs, the good nurseryman will do the rest, and probably not charge as much as he would if you were fussy.

Rock Bank

The other way to have a rock garden is to first of all well prepare a bank of soil, digging in leafmould peat, and sand; if the texture is heavy. Then get the lumps of stone of a common hue—perhaps a local sandstone, or "Grey Ragstone"—and dot these more or less evenly all over the surface, partly burying them so that they do not move afterwards, spacing them anything from 1 ft. to 2 ft. apart. Then plant vigorous, showy subjects between. Most of plants will be of the

clinging type, but here and there can be planted a slow-growing shrub, just to give "uplift."

The best plants for this type of garden comprise :— *Alyssum saxatile ; Anemone Pulsatilla ; Campanula carpatica ; Campanula muralis ;* Aubretia in many varieties ; Dianthus, or Alpine Pinks, in many sorts and varieties ; Iberis, or Candytuft ; Alpine Phlox ; and Violas. All these will grow merrily and put up a glorious colour display throughout spring and summer. The only attention that they will need is trimming back after flowering, to keep them from becoming too straggly ; lifting every third or fourth year for division and replanting, and occasionally dressing with soil when the roots obviously want it.

The best dwarf shrubs and miniature trees for all rock gardens are :—Pygmy Brooms, such as *Cytisus Ardoini ; Daphne Cneorum ; Daphne retusa ; Genista pilosa ; Juniperus hibernica compressa* (a perfect conifer) ; *Picea Albertiana conica ; Rhododendron hirsutum ; Salix ovata ;* and *Veronica pimeoides.*

To extend the list would be merely to copy a catalogue, and would probably set you off on a wild goose chase. All that I have done is to name a few that should form the nucleus of a collection, these being the lusty ones that will make a good show. The dainty and often difficult alpines cannot be more than a speculation, and are to be collected much as some people do postage stamps. You either see them first—or hear and read how fascinating they are, eventually becoming knowledgeable through trial and error.

Sun Lovers

Those already named are the kinds that revel almost everywhere. Should you have a dry sandy situation in full sunshine, the surest growers are :— Æthionema, Warley Rose ; Helianthemums, or Sun Roses, in many varieties ; *Hypericum reptans*, a dwarf St. John's Wort ; Lithospermum, Heavenly Blue ; Saxifrages of the encrusted or Aizoon type ; Sedums, or Stonecrops, and Sempervivums, or Houseleeks.

The Saxifrage family is so huge that it is doubtful whether anyone knows the lot, and some need hot sunshine, while others will only flourish in damp places. The Mossy group will succeed in dampish semi-shady spots. The study of a good catalogue will tell you all this, as well as guide you in your choice for the various positions and aspects that are to be filled. Never buy rock plants until you know about their peculiarities. The raisers will always help you—if you will let them. To be forewarned is enough.

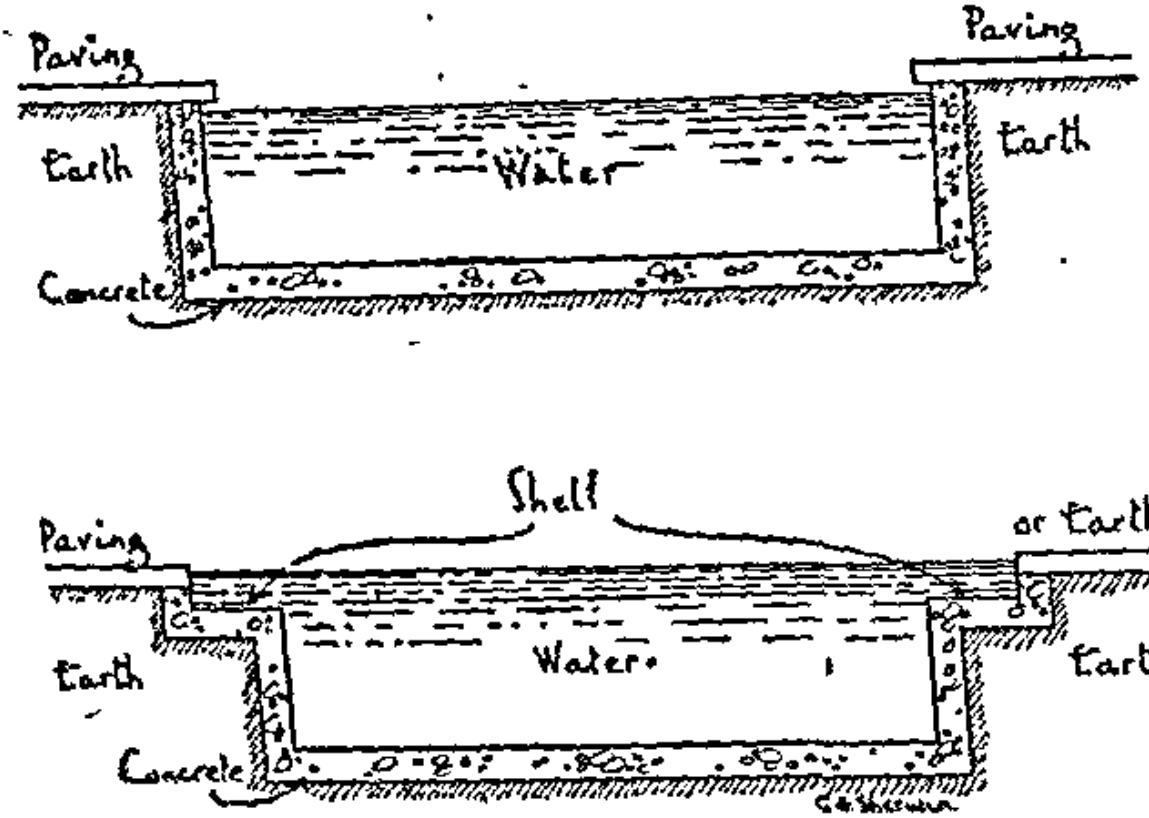
2. *Pools*

Pools and rock gardens often go together, and we have already seen one example in the photograph mentioned earlier in this chapter. Generally, when associated with rock gardens, pools are of informal character, but when made separate features in small gardens the best design is a formal one. No matter which it is, the basin of the pool is most frequently made with concrete. A tank, or an old barrel could be alternatives, but, generally, the builder's effort is the most convenient, for then the shape can be as desired. As the material construction is fully described in those leaflets issued by the Cement and Concrete Association, I will not tell you more about that, but there are one or two important points to remember.

An informal pool is made to the approximate shape and then camouflaged by the skilful placing of stones in and above the water level, hiding the edges and walls as far as possible.

There are two ways of making formal pools. Either a straight wall is constructed, or there is a shelf given to the outside to hold soil in which plants that like shallow water are planted to give a framework to the pool itself.

When making the walls, always keep them upright; not sloping like the sides of a basin. If kept perfectly upright and dead level all the way round the rim, the pool will retain water to the brim, but when there is a slope, water does not "hold" as well, and there is a nasty tidemark that



SECTIONS OF FORMAL POOLS.

jars your feelings every time you see it. Furthermore, if coping stone is laid over the edges of the upright walls of a pool the cement is hidden. But this cannot be done with a sloping wall without placing the coping so far over that there is a danger of stepping too near the edge and being tipped in.

When calculating the depth, remember that it should be just right for the Water Lilies. These are rather particular about that. For the small sorts, 15 in. is enough, while from 18 in. to 2 ft. suits the stronger sorts.

Small varieties, suitable for shallow pools are :—*Nymphæa candida*, snow-white flowers ; *N. Laydeckeri fulgens*, amaranth-red ; and varieties of *N. odorata*, that vary from white to pink and yellow.

Two of the best larger varieties are :—*N. Escarboucle*, vermilion-crimson and *N. Marliacea rubra-punctata*, rosy-

Other facts to bear in mind when siting for a Lily pool are:—Water Lilies do not like running water, and it is unwise to include a fountain in the scheme. They love warmth and sunshine.

Clayey loam enriched with bonemeal should be the planting medium. Never use leafmould, or mud, or anything that seems to be suitable. A thickness of about 5 in. spread over the floor is enough, or the plants can be inserted in baskets, or pots of soil, especially if the pool is too deep.

Plant Water Lilies during May. If done in autumn they are likely to perish.

The pests that attack Water Lilies are mosquitoes and black aphides. Spraying with an insecticide will repulse these. If a few fish are included they will also help to keep down trouble. Golden Orfe are a good kind of fish. They do not want feeding with "ants' eggs" but special fish food should be obtained.

Suitable plants to install upon the edge of the pool, to bring about informality are :—*Anagallis tenella ; Cardamine pratensis ; Eulalia japonica ; Funkia Sieboldiana ; Hemerocallis rutilans ; Lysimanchia nummularia ;* and *Lythrum atropureum.*

Plants that will flourish in shallow water in the shelf of the pool, where it is formed, are : —*Acorus Calamus ; Cyperus alternifolius ; Hypericum Elodes ; Mimulus luteus ; Sagittaria japonica ;* and *Thalia dealbata.*

3. *Planted Paths*

Expanses of paths laid with crazy or rectangular paving with gaps in between in which plants are inserted are especially suitable in small neat gardens, and there are a few good examples to be seen in the photographs. When laying the paving this intention should be borne in mind and some good fine soil placed underground at the right spots. If sufficient space is allowed, such plants as Alpine Phlox, Aubretia, and Pinks can be used. There are, however, a few subjects exceptionally suitable for this purpose. *Acæna*

Buchanani is a carpeter with silvery-green foliage. *Mentha Requienii* is a pygmy Mint, which, when trodden upon, emits a strong aromatic scent. *Antennaria dioica tomentosa* is another carpeter with grey leaves and the white flowers look like "kittens' paws." *Linaria æquitriloba* has ivy leaves and tiny heliotrope flowers shaped like Antirrhinums. *Oxalis magellanica* creeps and produces white-cupped flowers on ½ in. stems *Raoulia australis* is a lichen-like carpeter. Many of the creeping Thymes are most suitable. *Thymus Serpyllum coccineus* is the name of the traditional Crimson Thyme so much valued by many people.

Walls and Steps

The photographs in this book have been chosen to give you ideas, and there are all sorts of examples of work well done. In one, for instance, there is a dry wall around a tree, with a lawn on the top. This is really accidental, and it was given birth through circumstances. Very often, when re-planning a garden, there is a tree that simply must be retained but which upsets the prospective altered levels. Now, such a tree cannot withstand any alteration of the surface level around its trunk, So, a cavity is either formed around the middle, or, inversely, the soil is held up by a retaining wall.

Steps, too, have often to be designed to overcome a difficulty, and my experience is that such a drawback is generally turned to a novel improvement that would not have been thought about. There may be a manhole that has to be hidden, or a pipeline that must be avoided. A little ingenuity is more applicable than any set ruling and brings individuality to the garden—a quality always to be desired as long as it is not incongruous and freakish. Steps can be recessed, or projected, or shaped to form spirals. The patterns are limitless, but they should always be in keeping with the general character of the scheme. When they are right—they look it.

Planting flowers on the tops of hollow walls or in the crannies and corners softens the picture and there are a few most suitable sorts for this. Upon a shady side there will

grow :—*Arabis procurrens*, a small specie of the well-known large-flowered white Rock Cress. The Sandwort, listed as *Arenaria balearica*, is a bright green trailer that bears myriads of white flowers close to the stonework—if planted in a damp place. The miniature Ferns, such as a sort of Spleenwort, named *Asplenium viride*, will grow in dense shade. *Asplenium Ruta-muraria*, the Wall Rue, loves a sunny spot such as a crevice in the corner of stone steps. *Erinus alpinus* grows 3 in. high and bears lilac flowers. The Stonecrops, of course, simply revel on sunny walls, and will live where everything else starves. There are scores of sorts, such as *Sedum lydium* and *S. roseum*. The Houseleeks need some soil, but they will grow almost anywhere, and one, *Sempervivum tectorum*, will grow upon a tiled roof. Such as these are the gems for these positions. Stronger and more violent flowers will often take possession of walls containing soil and mortar rubble in their make-up. One such is the well-known Valerian (*Centranthus ruber*).

4. Ornaments and Furniture

Adorning the garden with ornaments and furniture is rather a tricky business and it is so easy to make mistakes. The difficulty is that, once we have become familiar with the garden, we cannot view it dispassionately. For myself, I shrug at the sight of leaden dolphins, or painted goblins, and stone rabbits, stuck willy-nilly on an otherwise charming rock garden. Far better is it to introduce ornaments and figures that suggest some practical purpose. Handsome vases upon the pillars of a dry wall, that look large enough to accommodate plants, will "set off" the job. In the middle of a lawn we can have a nice sundial, or bird bath. But see that the sun shines where the sundial is set, or the surroundings are attractive to birds for the bath.

Old world well heads can often be introduced to hide an eyesore. Perhaps a manhole is placed in a conspicuous position and it cannot be covered with soil. Make it a focal point by putting the well head and windlass over it, laying stone around the base. It cannot be emphasised too often

The Sunken Paved Path with well planted Rock Walls on each side suits this house perfectly. Such a Front needs little attention and always looks interesting. It suggests "warmth" in dreary weather and "coolness" when that virtue is welcome.

This Herbaceous Border reveals the wisdom of planting the subjects in informal clumps It also displays the advantages of a wide border In this instance it particularly suits the style of the house

This example shows the startling effect of planting Pinks along the edges of a long narrow Path It is strikingly simple and impressive but less interesting than a well designed garden once the novelty is appreciated

Very English and Formal is this garden with its clever arrangement of Paths Walls and Hedges at different levels Note the corner effects of the Box Edges and the Trained Yew in the background The raised Lavender Hedge adds a contrasting tone to the deep shades of the Yew and Box

that these seeming drawbacks often cause us to create a novel effect that we would never have thought about in the normal way.

Seats can also be placed in positions where there is a definite invitation to sit upon them, such as in a sunny nook, but when positioned purely for a whimsical effect they quickly fade into dejection. Elm, left in the natural colour, is better than a polished painted object. Old teak is expensive, but it always looks handsome and in keeping with the character of the scheme. Stone generally looks artificial, and cold.

Gates, too, add to the character of a garden. Old wrought ironwork, strong and simple, is tasteful, and there are hundreds of patterns to select from. They can often be picked up at the Michaelmas sales, the fact of them being secondhand making them more desirable. In such matters, I watch all the advertisements, hunt up people who deal in such things, and invariably end the quest happily. Not far from where I am writing this book lives a man who bought such a gate and then planned his new small garden around its installation. It has turned out to be a nice job.

One other possible form of adornment is the introduction of tubs or half-barrels. When planted with buxom Hydrangeas, or Agapanthuses, and placed in front of buildings, or alongside a wide path, or on the corners of steps, they make a lot of difference, especially where there is much grass.

But do introduce ornamentation in the garden warily, and don't be afraid to get constructive criticism. People who generally are afraid to listen to outside opinions are also afraid that they are making mistakes. And they generally are.

CHAPTER VI

CLIMBERS

Everyone is interested in climbing plants, either upon the house wall, or pergolas. They give that desirable "uplift" and clothed appearance that creates an intimate effect. And they are lively and lovely.

We must be mindful that the term "Climber" is, in the majority of cases, a misnomer. Wall Shrubs is a better name for them, for they have to be trained to grow up the positions they are to occupy, and this means that we must provide suitable supports.

When grown upon the house wall, as some of them ought to be, they should be provided with wires, rather than be fixed with pieces of rag and nails. Nothing looks worse than untidy nails and old ties dangling or protruding from a wall face, denoting that some climber or other has at some time grown there. Furthermore, if proper wires are fixed in position, the problem of training the stems and branches is much simplified.

Galvanised wire should be used and that known as "15 gauge" will be strong enough for small houses, while it will also be flexible. Galvanised "Holdfast" eyes are used for the ends, while ordinary Driving Eyes are good enough in the intervening spaces. If the wall is 20 ft. across it will need two lots of eyes, and, of course, Holdfasts at each end. The wires should be about 9 in. apart.

Straining bolts and nuts are affixed to the wires at one end in order to obtain tautness without any bother. Holdfasts and bolts are about 12s. 0d. per dozen and the plain eyes 15s. 0d. a gross for those 5 in. long, the most useful length. Wire is bought by the hundred yards, the prevailing price for the "15 gauge" being 5s. 0d. for that length.

For fences, such as where trees are trained alongside a path, instead of Holdfasts at the ends, the wires are tightened

by galvanised Raidisseurs, that are more suitable to attach to posts. These cost about 1s. 0d each. If you ask the ironmonger for these things he will know what you mean.

There is only one thing to be careful about when training plants to these supports. If not attended to often in the growing season their fresh growths will get between wall and wires, making it impossible to move them in a different direction, and also weakening the eyes by forcing them from the wall.

Root Run

The next problem is the place where the roots are to go, especially around new houses. The builders generally fill up the trench against the foundations with all the rubbish they want to hide. It is well to excavate a large hole for each climber and fill it with better soil from the garden. For special subjects, we even buy good rotted loam to prepare a bed. This should be well-trodden down before the roots are inserted, even if a little has to be dug out again at planting time.

Buying young plants is the right way. These "get away" quickly, especially if their roots have been inserted with the least amount of disturbance. Some sorts of climbers are so sensitive about this that the nurserymen grow them in pots to save injury. When they arrive, break the pot if any roots are projecting through the drainage hole, as they often are, scratch the surface of the ball, just to break its hard surface, and plant firmly, making sure that the garden soil becomes welded, as it were, to the soil in the ball. Quite often, there are failures because there is not this cohesion and the roots do not grow out of the ball into the garden.

After being planted, the top shoots should be tied lightly to the lower wires, until the roots have settled down. Do not prune the shoots, or shorten them in any way. If the roots have not been unduly disturbed, they should not need it. It sometimes follows, however, that a plant will not grow satisfactorily—it "hangs fire." In that case, attempt to

make it assert itself by reducing the old shoots. Very often, this treatment will make it produce new shoots, and once it starts it will soon begin to ramp.

Training

Those climbers that need training, and should be more aptly termed "Wall Shrubs," will often send out lots of shoots from the base instead of aspire to grow up the wall. These should be cut away as often as they appear, while the new shoots that emanate from the older branches higher up should be trained into position. It is just a case of snipping off the unwanted ones and tying the rest to the wires with soft twine. Japanese Quince ("Japonica") needs this sort of training, as also does the Winter Jasmine. Others are Pyracanthas, Jew's Mallows and Escallonias.

There are some, such as Climbing Roses, Honeysuckles and Wistarias, that produce few bottom suckers, but are inclined to become leggy and strive to get too high. These can be made to behave themselves by carefully shortening their tops and by spreading out and fixing down the main stems and shoots.

When and how to do these operations often confuse the amateur, for some subjects need to be thinned or pruned before flowering, and others need to be treated after flowering This is the more confusing because various members of the same family call for these opposite treatments. Rambler Roses need cutting down after flowering, so that the new growths can be trained in place; Climbing Roses need judicious pruning in late March. Early-flowering Clematis must be pruned after flowering; Late-flowering Clematis of the large-flowered type should be pruned in early spring; early-flowering evergreen Ceanothuses have to be pruned—if at all—after flowering; deciduous late-flowering Ceanothuses must be drastically treated in early spring. Do notice that it is the early flowerers that demand the least pruning and that it is done in the summer, after the flowering season. This enables them to produce new shoots in that summer,

upon which they will bear flowers in the next season. On the other hand, the summer and autumn-flowering shrubs send forth new shoots in spring and it is upon these that they bear flowers without any pause. If in doubt about anything, it is wise to see how a climber behaves, and then act accordingly. It is far better than striving to memorise a lot of unintelligent details.

Climbing Roses

Climbing Roses that have emanated from bedding varieties, such as Climbing Etoile De Hollande, or Lady Waterlow, need no pruning when first planted, for if you cut them down they may revert to their parental habit and remain stunted. So take care not to remove the shoots that are present when they arrive from the nursery. In after years, it is well to prune off unwanted long growths at the top each spring, just as you would normally treat a standard rose in the beds. But endeavour to keep plenty of growth at the top of the climber as well as encourage some at the bottom to fill out the space.

Rose Varieties

My favourite climbers are Gloire De Dijon, buff salmon-yellow; Bouquet D'Or, buff-yellow; and Reve D'Or, buff, all of which have been popular for over half a century. They are ideal for south and west walls and behave very well indeed. Reve D'Or is the strongest of the lot, but not the best of the three.

Another old rose that makes a wonderful display in a warm place, where it can grow to the top of a high building, is the yellow Banksian. The clusters of small flowers are borne in early spring. After that it produces shoots that will bear the crop a year later. These should be tied into position if all are wanted. But, if overcrowding follows, it is well to prune by removing many of the shoots directly after flowering.

If you prefer large-flowered sorts in various colours a few are:—Mermaid, sulphur yellow (single-flowered); Allen Chandler, vivid scarlet; Climbing Richmond, crimson; Climbing Caroline Testout, bright pink; and Mme. Alfred Carriere, white.

Ramblers

Those climbers already named are perfect for growing *against buildings. Ramblers are more suitable for pergolas,* or growing against trees—anywhere where their vigorous habit is not a defect, and where the air can pass around *their shoots. Against a wall they often are attacked by* pests and look miserable. As already stated, the chief treatment for them is to cut away the oldest growths after *flowering to ground level, and tie in their places the new* suckers. These suckers are untidy until this is done, but there is little to do with them except temporarily tie loosely to the posts. Dorothy Perkins, pink; Paul's Scarlet Climber; Emily Gray, golden yellow; American Pillar, deep pink; and Tea Rambler, coppery pink; constitute a collection of the commonest and best.

For a wire fence not more than 5 ft. high, to form a screen, or the background to a flower border, there is one rose superior to all others—Zephirin Drouhin. It is fragrant, thornless, and the leaves are bright and glossy. The silvery pink *flowers are borne in profusion all through summer and* autumn. It needs hardly any pruning and should be treated like an ordinary climbing rose, rather than a rambler. Incidentally, it is said to make a good hedge.

Both ramblers and climbing roses can be trained to pillars, or up pergolas. For tall pergolas the ramblers would be best, while for shorter ones the climbers are preferable.

Pergolas

It is appropriate here to comment upon pergolas. We must be remindful that they are chiefly made to accommo-

date climbers, and are not often beautiful in themselves. At best, they are artifices and look it. At worst, they are ugly blotches and when built of galvanised iron, or concrete, spoil the soft effect. Well done rustic work is the most natural and suitable for the plants, providing the wood has not been creosoted, or painted. Pine logs as cut from the forests, standing singly with no other adornment except the climbers, are not amiss. If they must connect to form arches or walks, slack chains or old tow ropes are permissible, but discriminating taste is put to the test in the installation of this form of garden decoration.

To preserve the sunken parts of posts, use concrete rather than wood preservative. Concrete disagrees with plant roots least of all, and it does help to stop the posts from wobbling. Dig your hole a few inches wider than for the post; place a blob of concrete in the bottom; sit in the post; fill up the remaining space with the concrete and pile it so that it sticks about 2 in. above surface level. After it has set, dig the hole for the climber roots close beside it.

Climber Selection

The self-clinging Virginian Creeper that gives the bright autumnal colours is *Ampelopsis Veitchi*.

All Clematis need good soil and should be planted among other climbers to give protection. They need constant attention in the matter of training to have them at their best. There are many species and varieties, the species generally being less fussy and more rampant. The early-flowering and best known of these is *Clematis montana* whose blossoms are like white Anemones. The variety *Clematis montana rubens* is soft rosy-pink and most suitable for a west side of a wall, or fence. The Virgin's Bower (*Clematis flammula*) bears myriads of creamy-white flowers in autumn, and will stand drastic pruning in spring. I grow it upon the north side of a wall. Of the vast assortment of large-flowered varieties, the best for small gardens is Nellie Moser, silvery white, shaded mauve. Second choice is Ville de Lyon, of a

rich crimson colour. The late-flowering sort that bears intense violet-purple flowers and seen in many gardens is *Clematis Jackmanni.*

The early-flowering wall shrub popularly known as "Japonica" should be properly named *Cydonia japonica.* It will flourish in any aspect, but needs constant attention, or it will become a thicket. It deserves its popularity. Incidentally, the word "japonica" is a specific name to a host of other plants, including *Primula japonica; Lilium japonica* and *Anemone japonica.* It signifies that the plant came from Japan. Either call it Japanese Quince, or Cydonia. There are other species of the same family.

Forsythia spectabilis is the best of its family. It is normally a shrub, but can be induced to grow by training in the uppermost new shoots and removing the lower ones, year by year.

Jasminum nudiflorum is that bright yellow-flowering winter wall shrub that will grow in any position, and can be trained without much trouble. It is a great favourite.

Of the many Honeysuckles, there are two worth prior consideration. One is *Lonicera periclymenum*, that bears reddish-yellow fragrant flowers all through summer and autumn, and the other is the late Dutch specie, *L. serotina.* These will grow almost anywhere, the only trouble being that they need constant attention.

That hardy climber that will grow with amazing rapidity, smothering the garage, or whatever is beneath, under a mass of twining shoots, and bear profuse panicles of white flowers, has the awful name *Polygonum baldshuanicum.* It is too rampant for good places.

Pyracantha Lælandii is that well-known evergreen that produces those large clusters of scarlet berries during winter, and looks as though it were part of the wall itself. It is really a shrub, but can be trained to grow upright without much fuss. Its counterpart that bears orange-coloured berries, instead of scarlet, is *P. augustifolia.*

The Chinese Wistaria (*Wistaria sinensis*) needs no description. It needs a considerable amount of room to grow to

perfection, and must be pruned and trained regularly. It has a nasty habit of getting into water pipes that drain the roof. Otherwise it is a noble and delightful climber.

There are hundreds of other sorts of climbers and wall shrubs, but I have only selected a few, because just a few are wanted. These are deservedly popular and the most likely to be available, as well as be moderately priced.

CHAPTER VII

FLOWERS

Apart from special features, such as rock gardens, or climbers, we depend upon a succession of flowers to give us beauty and colour throughout spring, summer and autumn. There are two or three methods employed to do this. One is to use a permanent bedder, such as the Rose, that must be sufficiently continuously in flower to justify its position. Another is to plant, as often as possible, brilliant subjects that are removed and exchanged for others directly they have finished their short and glorious life. A third way is to arrange hardy perennial plants in a border so that there is a constant colour display over several months. In addition to these we have specialities that arrive in their respective seasons—such as Chrysanthemums, Gladioli, Daffodils and Shrubs. Let us consider the main flowers in this chapter and deal with the rest in the next.

1. Roses

Although bedding Roses are deemed to flourish best in clayey soil, a lack of clay is not a drawback. I always contend that they will thrive in any well-cultivated ground, in fact, I have gained prizes for blooms that have been grown on top of chalk. Good manuring and thorough cultivation is far more important than the nature of the soil.

The right way to start is to grow well-tried varieties, rather

than expend a lot of money upon doubtful novelties. Only after experience has been gained should the advanced side of the venture be embarked upon.

The Doctor, bright pink; Betty Uprichard, salmon-pink and carmine; Etoile De Hollande, bright dark red; Mrs. Henry Bowles, rose-pink; Norman Lambert, bright yellow and salmon-orange; and Ophelia, bright rose; are a good half-dozen for a town garden.

Picture, rose-pink; Mme. Butterfly, salmon; Shot Silk, cherry-cerise; Mrs. Sam McGredy, scarlet-orange; Southport, scarlet; and Lady Forteviot, golden-yellow; can be added if a dozen are wanted. A study of a first-class catalogue will reveal many score of other excellent sorts and you will be bewildered. If you can, get half a dozen lists and compare them. Where you see a rose praised in every one it is good.

Cultivation

Planting is best done in the autumn, but can be carried out until the late spring. Put the budding joint just below the surface of the bed, and do plant very firmly. The best spacing for dwarf bedding varieties is 2 ft. apart in all directions.

Pruning should never be attempted before the end of March. It consists of cutting back the newest shoots to within a few inches from where they started a year before. This should always be done immediately above a dormant bud, and that bud should point in the way you would like the new shoot to go. If the bush is a weakling, it should be pruned very drastically, but if it is vigorous, it should be treated more leniently.

In dry weather, Roses like plenty of moisture. Good soakings will suit them, and so will a mulch on the surface above their roots. Lawn mowings spread straight from the grass-box will do a lot of good.

As ordinary Roses are always budded on to some sort of stock, it is absolutely imperative that all suckers are vigour-

ously removed. If allowed to grow they will kill the plants above.

Roses are gross feeders, but remember the old rule that only the healthy ones are able to take much. Like human invalids, ill Roses are unable to digest richness, but they are different from humans in that the latter can refuse to eat, whereas Roses must put up with what is given them. It may kill them. Buy a good proprietary fertiliser and use it with the utmost discretion—after reading the directions.

Greenflies are the commonest bother. These most often attack trees and bushes in enclosed spaces, but they seldom are seen in the nurserymen's fields. If it is impossible to give them such an open position, therefore, be on the lookout for the parasites and spray with a suitable insecticide.

Mildew often puts in an appearance during late summer. A quarter-pound of washing soda dissolved in 2 gallons of water, sprayed over the foliage, will generally clear away this trouble. Chemists sell what are known as "spreaders" that can be added to the water to make the wash adhere better. Failing that, a little soap will help matters, but the "spreader" is better and is unrationed.

Those are most of the essential facts about bedding roses. There are many other details to learn if the grower aspires to showing or becoming an authority upon the subject. These are obtainable from the National Rose Society and books that deal exclusively with them. You will find, for example, that there are hundreds of sorts of species, as well as varieties, and they need different ways of pruning, and they prefer various soils and aspects. But for ordinary bedding Roses, it is unnecessary to gain that vast knowledge.

Standard Roses should be treated in much the same way as dwarf bedders, except that their stems are taller.

Polyantha Roses, such as Ellen Poulsen, Gloria Mundi, Paul Crampbell, and the hybrid polyanthas, like Anne Poulsen, Karen Poulsen, and Salmon Spray, should be pruned fairly hard after being planted, but in subsequent years only the old flower heads must be snipped off in the Spring.

2. Bedding Plants

Bedding plants can be divided into two main classes. There are those that are planted in autumn to bloom in the spring, and those that are planted in early summer to make a blaze of colour during late summer and autumn. They are generally cheaper to buy, than to raise from seed, and give no trouble, providing they are bought sensibly. At most a few dozen are wanted, and few, if any, of them will cost more than *8s. 0d.* per dozen.

For autumn planting the chief subjects are—Wallflowers, Forget-me-nots, Polyanthuses and Tulips. There are also Sweet Williams, Canterbury Bells and Pansies. But these last-named should be planted as borders to the kitchen garden or in special corners, rather than in the showbeds, for they blossom too late in spring to make it possible to fill up with the summer bedders.

The best effects are made with masses of Wallflowers, or with Forget-me-nots, interplanted with Tulips.

There is a host of choices for the summer effect. Antirrhinums are first favourites. China Asters, Stocks, Salvias, Bedding Dahlias, Heliotrope, Lobelias, Geraniums, Petunias, and Nemesias—to name the most popular, are sold by greengrocers, stallholders and nurserymen, by the thousand every season. A large proportion die, simply because people do not take the trouble to prepare the beds thoroughly, or they plant them too early. These appear upon the market before they ought because people will buy them, only for the first frosty night to blast all hopes. Order your plants early, by all means, but do not take delivery until the last week of May, or the first week in June. In the meantime, obtain all the show you can from the spring Wallflowers, etc., preparing the beds immediately after for the reception of the new occupants.

The soil in this class of bed should be nice fine loam that that has been sifted to make it friable. I like to fork in plenty of leafmould or very decomposed manure in late spring, after the old bedders have been cleared away, and

before the new plants are inserted in position. After the digging, the beds are left to settle down for a day or two, and are then trodden over and raked smoothly to shape. If very dry, they are drenched with water two days before the actual planting takes place

In autumn, when the summer bedders are cleared away to be replaced by Wallflowers, etc., the beds are given another digging. Lime is scattered over the surface in some seasons, and in others, bonemeal, or a general fertiliser is added to replace the goodness that has been taken away. By these spring and autumn treatments, the beds are kept up to a state of good fertility.

Formal and precise planting is the secret of getting the sort of results that you see in public parks Generally, plants need to be a foot apart in all directions. The garden line, a measuring stick and a trowel are the requisite tools and their uses are self-explanatory. The smaller the bed, the more necessary is it to be precise. Firm planting is important.

Perhaps, if the weather is dry and warm, watering may be necessary just afterwards, especially in the case of summer bedders, and it may be advisable to stick up a little shading until the plants revive from the operation. After that there is little to do beyond stirring the surface of the soil in the early stages, and removing flower heads after they fade. If dead heads are picked off regularly, the flowering season is prolonged.

Hardy Borders

Herbaceous Borders are made much of in grand gardens, and a small edition of such a feature can often be included in the Quarter Acre. Delphiniums, Lupins, Anchusas, Peonies, Michaelmas Daisies, Japanese Anemones, Columbines, Campanulas, German Irises, Erigerons, Gaillardias, Geums, Heleniums, Heucheras, Oriental Poppies, Phloxes, Pyrethrums, Rudbeckias, Sidalceas, Golden Rods, and Veronicas comprise the best subjects for this kind of border. Some of these subjects grow 6 ft. high, and others are com-

paratively dwarf. Some bear flowers as early as May, while others give their display as late as September. The problem is to arrange them within the border, so that they blend together, and yet give colour in good proportion throughout the season. There is no need to tell you which are which, for if you do not already know, a perusal of any nurseryman's catalogue will state all the facts.

They should be planted to an idea, or a scheme. About the worst method is to put them in serried rows. I prefer to put them in informal clumps, grouping 3, or 5, or 7 plants within each clump. The tallest sorts are used in the fewest numbers, while the front and dwarfer sorts are spaced closer together in fives or sevens. At the back, the Rudbeckias, tall Michaelmas Daisies, Delphiniums, Lupins and Golden Rods are planted 2 ft. or 3 ft. apart in their respective clumps, while in the front positions, German Irises, Columbines, Dwarf Campanulas, Erigerons, Heucheras, Dwarf Michaelmas Daisies and Dwarf Veronicas are each spaced a foot apart in their family clumps. The medium plants, such as Japanese Anemones, Campanulas of the right type, Michaelmas Daisies of medium height, Sidalceas, Oriental Poppies, and Pyrethrums, are placed in the middle parts of the border. But they are not kept rigidly in shape, and there are variations, so that an undulating effect is produced.

Where Peonies are included in the scheme, these should be planted close to the front, and 3 plants spaced in a triangle, 2 ft. apart will make a large spread. There is a special reason for this. All the other herbaceous plants ought to be lifted every third year, the border trenched and manured, and the plants divided into small pieces before being replanted. But Peonies take a long time to establish, and once settled in should not be disturbed for several years. If in the front it is easy to leave them alone when the rest of the border is completely reorganised.

Lifting some of those other plants is hefty work, believe me, for some of the Heleniums and Michaelmas Daisies will have developed roots ten times the size they were when put in. They make a glorious show in the second year after

planting. In the third, they produce too many shoots, and the flowers will be inferior, unless there is some thinning. Where a Michaelmas Daisy plant throws up 20 shoots, for example, it is a good thing to pull all out of the middle of the root, leaving 7 or 8 around the outsides to grow up and form large strong heads.

Staking, or giving supports is part of the routine. I find that ordinary hazel boughs (pea-sticks) inserted close to the roots in late April and May, just when growth is developing, will not look unsightly for very long. The shoots will grow up through them naturally, soon hiding the sticks. About the worst way to stake a border is to let it grow too high and then use a lot of string. If left altogether, the first storm will spoil everything.

The hardy border is an untidy place in autumn. If you can bear it, it is well to let it remain so for as long as you can. The dead foliage gives some protection to the crowns, and a lot of the goodness within these stems returns to the plants if left till almost brittle. Spring is the time to give the site a thorough clean-up, forking the soil between the various plants, and dressing with a fertiliser such as Nitro-Chalk. In heavy soils a liberal dressing of Basic Slag, before the digging is done, will do much good. It aerates the ground, and the phosphate it contains improves the actual flowers.

Annuals

I often wonder how many 3d. packets of annuals are bought each year and either never sown, or sown, but never grow. The number must be colossal. These lovely flowers seldom get the conditions they need. Either they should be sown in special beds, prepared as carefully as for onions, or they should be used as a temporary measure in a special capacity. Such an instance is mentioned in Chapter 3. Of course, some will flourish in spite of bad treatment. Marigolds, Eschscholtzias, Shirley Poppies and Borage will often appear in an untidy garden. But Larkspurs, Clarkia, Love-in-a-Mist, and Godetias, chiefly grown for cutting, ought to be

sown in a part of the vegetable garden, where they can be attended to in much the same way as vegetables.

CHAPTER VIII

SPECIALITIES

1. *Shrubs*

Our forefathers had a mania for shutting the rest of the world from that small spot they liked to feel was their own, so planted lots of Laurels against the boundaries and called them shrubberies. In these enlightened days, shrubs have become a cult and some gardens are filled with many beautiful subjects that are almost worshipped. The Laurels, Aucubas, Lauristinuses and suchlike heavy growers have fallen into disfavour. In their places are grand Viburnums, Cherries, Brooms, Deutzias, Lilacs, Spiræas, Hibiscuses, etc., etc.

Exceeding them all are the wonderful Rhododendrons, Azaleas, Heaths and Kalmias, that abound in luxurious conditions, where there is no lime in the soil. If you live in a suitable neighbourhood, it is well to develop an interest in these, doing so by visiting local gardens and nurseries, but, if there is a sparsity of them in the district, you may take it for granted that the soil is not right for them. In that case, concentrate your attention upon ordinary shrubs.

In a small garden it is impossible to go in for comprehensive collections, but it is possible to make a speciality of a family. Among the best small trees or shrubs to consider are:—Japanese Maples (Acers); Azaleas (in lime-free soil); Berberises (there are hundreds of these); Cistuses (in dry soils); Cotoneasters; Brooms (Cytisuses) (in dry soils); Diervillas (or Weigelas); Ericas (or Heaths); Hydrangeas (in sheltered gardens); Philadelphuses ("Syringas"); Prunuses (Flowering Cherries); Pyruses (Flowering Crabs);

This back entrance is in harmony with the old world house The Wrought Iron Gate the Trained Apple Trees along the skirting fences of the Path, and the Beehive are all fitting for a country garden It should not be attempted elsewhere, but where suitable such a scheme is both profitable and picturesque

A really artistic effort featuring Grey Weathered Limestone in a most difficult position is shown in this photograph It is a good example of what can be achieved when patience and thoroughness are practised It is a marvellous set-piece that pleases every day of the year

The charm and beauty of a Formal Lily Pool, with a paved Surround, is *revealed in this photograph The design is simple, but the raised back*ground and the careful planting of suitable shrubs makes it distinctive

Carpeting Plants between bits of Paving upon the floor of a largish Forecourt are seen at their best here Alpine Campanulas as seen in the photograph have a long season of flowering Perhaps this view could be improved by the judicious placing of some sort of ornamentation in the foreground

Spiræas (there are scores of sorts); Syringas (Lilacs); Veronicas; and Viburnums.

But it is also possible to have a small representative selection of shrubs, such as one including a good variety of each of the above. To these can be added the following:—*Buddleia alternifolia; Camellia japonica; Ceanothus thyrsiflorus; Choisya ternata; Deutzia gracilis campanulata; Forsythia intermedia vitellina; Genista hispanica; Hypericum patulum Henryii; Laburnum Adamii; Magnolia Soulangiana; Pernettya mucronata; Potentilla fruticosa;* and *Rhus typhina.*

You will get full particulars of their flowers and heights from any good catalogue. Lists for these also include such other interesting facts as autumn colourings and fruits. All these virtues have to be considered in order to exploit your taste.

A word about those names. You will notice in the above list that Lilacs are "Syringas," while the Mock Orange Blossom often called "Syringa" is botanically named Philadelphus. "Give me the common name" is a common request. The truth is that so-called common names are misleading and confusing, whereas, the true specific name leads to no mistakes. So, the man or woman who wishes to be interested in shrubs must get an inkling of nomenclature. The surest way to have the names right in the garden is to use good labels. We gardeners say that a plant that has lost its label has lost half its value. It is true, if we value the time spent in trying to jog our memories later. But, if we often read the name we become familiar with it, and in that way increase our knowledge and interest.

You will also notice that the specific names are often spelt with capital initials, and often otherwise. This is to convey to shrub fanciers the derivation of those names. If given in someone's honour, such as *Adamii*, or *Henryii*, the capital is used. If the title is descriptive, such as *alba* (white), there is no capital letter. There are other reasons for these nicetie, but I have given enough to show that they are not accidental.

It is probable that your garden is exceptionally damp, or

is dry, or is in a smoky town. Here are a few selections for such places :—

Trees and Shrubs that will grow in Towns

Acer Negundo variegatum ; Amelanchier canadensis ; Berberis Darwinii ; Berberis stenophylla ; Colutea arborescens ; Cornuses (Dogwoods); Cotoneasters; Cytisuses (Brooms); Deutzias; Forsythias; Hypericums (St. John's Worts); Philadelphuses; *Phillyrea decora ;* Prunuses (Flowering Plums and Cherries); *Rhus Cotinus ; Ribes sanguineum* (Flowering Currant); Spiræas; Syringas (Lilacs); Viburnums; Weigelas (Diervillas).

Trees and Shrubs that will grow in Damp Positions

Alnus glutinosa ; Acer dasycarpum ; Andromeda polifolia ; Catalpa bignonioides ; Cercidiphyllum japonicum ; Cornus alba ; Cotoneaster microphylla ; Halesia carolina ; Hippophæ rhamnoides ; Salix incana ; Sarcococca humulis ; Spiræas ; Vaccinium corymbosum ; Viburnums; Weigelas.

Trees and Shrubs that will grow in Sunny Dry Situations

Atriplex halimus ; Cytisuses (Brooms); *Caragana arborescens ;* Cistuses; *Colutea arborescens ; Genistas ;* Lavender; *Phlomis fruticosa ;* Rosemary; *Santolina incana* (Cotton Lavender); *Senecio Greyi ; Spartium junceum ; Teucrium fruticans ;* Ulex (Gorse).

Shrubs that will grow in Shade, often under the branches of others

Andromedas; Aucubas; *Berberis aquilifolium ; Euonymus radicans ; Hypericum calycinum ; Ruscus aculeatus ; Rubus odoratus ; Sarcococca humulis ;* Skimmias; Spiræas (especially the variety Anthony Waterer); Vacciniums; Viburnums; Vincas (Periwinkles).

Do not plant tallish trees and shrubs too thickly. We see so many places where that has happened, and the result is a distressing congestion of competitive deformities. Far better is it to plant half a dozen 10 ft. or 15 ft. apart and fill in the intervening spaces with low subjects that will cover the ground—as are most of those listed in the selection for growing in shade. Some of the herbaceous plants can also be planted in the gaps. Daffodils, Dog's Tooth Violets, Violets, suitable Primulas, Hardy Cyclamen and Ferns will also revel in such positions. These are comparatively inexpensive and generally spread fairly rapidly. Firms that deal in bulbs will give you all the information that you need.

Pruning

Pruning shrubs can either be very complicated or simple. There are books written about it that I have never read. Instead, I prefer to use my own judgment by watching the habits of the subjects and treating them accordingly. Those that throw up strong growths in early summer and bear the flowers at the tips are severely pruned in early spring. Ordinary bedding Roses, the Purple Buddleias, the late-flowering Ceanothuses and Tamarisks come within this category. On the other hand, there are many shrubs that form strong new shoots in late summer, upon which they will produce flowers in the next spring or early summer. Brooms, Forsythias, the Winter Jasmine, some of the Spireas, and Kerrias are pronounced in this respect. The old shoots are cut off directly after flowering has ceased. They then start to grow again and it is these growths that will bear the next season's crop, consequently, they must not be touched for a whole year.

But some of the moderate growers in the second class need hardly any attention, beyond snipping off dead flower heads, or a wild shoot removing. Deutzias, Weigelas, Genistas, Coloured Hydrangeas, Philadelphuses, and Lilacs, come within this group.

Quite often the nurseryman grafts shrubs on to wild stocks,

especially things like Flowering Plums, Cherries, and Lilacs. Watch the base of the stems and if the leaves of these suckers are slightly different from those on the main parts of the plants, remove them without ceremony.

Shrubs do not want a lot of individual attention, but they do appreciate good cultivation. Before planting, the site should be enriched and thoroughly prepared, and afterwards, a little fertiliser improves their health.

2. Special Flowers

It is impossible for any gardener to have a profound knowledge about everything, even if he, like myself, devotes his whole time to horticulture, but what we do like to do is to acquire a general knowledge about all sorts of subjects, and become specialists of a few fancies. There is no reason why the owner of a small garden should not do likewise. Sweet Peas; Gladioli; Border Carnations; Chrysanthemums; Irises; and Roses are the favourites. Time and conditions will play a part in deciding which of these it must be.

Sweet Peas need thoroughly good cultivation and they suit anyone with plenty of time on hand to trench the site, raise the plants, erect the supports, water and feed the growing plants, disbud and tie-in the shoots and cut the flowers at the right stage. The seeds cost about a penny apiece—a shilling packet of each of half dozen varieties will make a niče row across the plot. How to deal with these is well described in the small booklets that are sold by the seed raisers. Incidentally, this is one of my pet flowers.

Gladioli are less trouble and will grow in any good soil. Corms cost a few shillings a dozen, and can be planted in late March and April. They may need supports. Flowers arrive in summer. Corms are lifted in October, dried off and replanted again in the next spring. These and Sweet Peas are best grown in the vegetable garden, where they will not look amiss in straight rows, and it is possible to give them a change of soil every year.

Border Carnations are more expensive, the best plants costing a shilling or two apiece. They have to be staked and disbudded and will last for two or three years. Propagation is by layers, often described in Gardening Journals, and Saturday Articles.

Early-flowering, or Border Chrysanthemums, too, are most often grown in the cultivated garden. Plants are comparatively cheap to buy, but we generally like to retain our own stocks, by lifting the roots in autumn, boxing, or potting them and keeping in a cold frame, where they are safe from excessive wetness or frosts. In spring, they are divided up and replanted in the garden. Other attentions are staking and disbudding. Again, the firms that specialise in these either give full directions in their catalogues or sell booklets describing cultivation.

Irises, and Roses are generally grown in formal ornamental beds, the chief interest being in the wide variations of qualities, like colour, perfume, shape, and size. The chief reason for developing an interest in any particular flower should be an exceptional liking for it, but, where the conditions are unfavourable, there may be other flowers equally worthwhile. There is much to be said for the cultivator who takes an interest in an unusual family. I know of one man whose rockery and damp shady shrubbery appeal to gardeners because of the wonderful collection of Saxifrages. Rock Pinks and Rock Phlox are other plants that are worthy of specialisation.

About the most expensive and tantalising hobby is to grow the many sorts of Lilies. Seeing that they are difficult, and a single bulb may cost a guinea, it can be imagined how exciting it is. Yet I know of one gardener who tries them in in his small lime-free garden.

Dahlias are favourite flowers among amateurs. These showy autumnal flowers are so easy to hybridise that there are hundreds of varieties in all shapes, sizes and colours. Sometimes they are grown in mass formation, as is the bedding variety, *Coltness Gem*. Often the huge Cactus and Decorative kinds are given lots of room and are fed like

prize cattle. Then there are the medium Collarettes and Peony flowered, or the tiny Pompoms. A visit to a show will reveal all their variations. It is better to concentrate upon one section of this large family than dabble in all of them. A greenhouse is necessary to propagate the plants from cuttings, unless one is prepared to buy fresh stocks every year. The old roots can be stored from frosts in winter, and will grow when planted again each late spring. However, the young rooted cuttings give the best flowers.

Greenhouse

A small greenhouse is a great asset in a garden where the owner is a keen plantsman and has the time to devote to it. The Late-flowering Chrysanthemums can become a fascinating study. Winter and spring flowers in pots, like Cinerarias, Primulas, Schizanthuses and the usual bulbs, are all possible in ideal conditions.

Unfortunately, most small greenhouses become storehouses for garden seats, and breeding grounds for woodlice. It is because the owners have not taken the trouble to master the management of these useful places before they attempted to grow their favourites. Watering, heating, ventilation, composts, potting, feeding and pest control should be intelligently learned, either by personal instruction, or the study of a really good book before much money is expended upon plants. Otherwise, it is best forgotten, the gardener growing only those things that do not need this protection.

CHAPTER IX

OPERATIONAL

Vegetable plots must be dug or trenched regularly. The *site for fruit trees and bushes needs a thorough upheaval* before any planting is done. The herbaceous border needs to be dug deeply, or trenched every third year. The position for a lawn wants thoroughly digging and prepared before

seeds are sown, or turf is laid. Rose beds have to be dug before planting. Where specialities are grown, like Dahlias, Sweet Peas, Gladioli and Chrysanthemums, thorough preparation of the soil is essential.

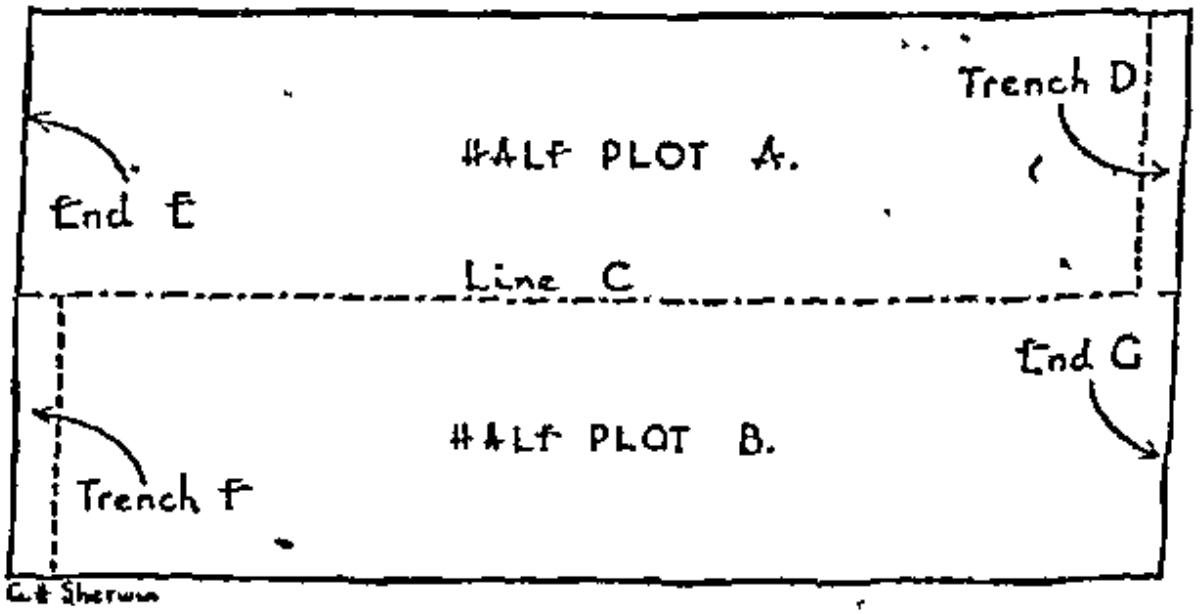
Spade

The spade is priority tool No. 1. When buying a new one the test of its quality is its shininess. A large size is a disadvantage. The smallest of the standard sizes (as distinct from small border spades) is most suitable for everyone. The first job will be to "break it in," i.e., wear off the roughness so that soil will slither off it smoothly. Before it gets to that stage it will have to be scraped frequently with a small wooden wedge, and at the end of each afternoon or evening's work, it should be oiled before being hung up in the shed. Here is a good use for old oil from the motor sump.

Digging

In the act of digging, thrust the blade into the ground to its top, keeping the handle upright. Always side-cut the clod to be turned over before pushing the blade in at the back part. Then prise the handle backwards with one hand, and slide the other down the haft in order to lift the clod right out of its position. Then with a flick of the wrists, it is shot off the blade, landing upsidedown in the trench immediately in front. If this is done in the autumn, or a long time before planting will take place, the clod is given not more than one prod, to break it slightly, but if planting is to follow quickly, it is pulverised more thoroughly. The whole action is completed with loose muscles and an easy movement. Beginners keep themselves too tense, rush too much, and are apt to strain their backs. More will be accomplished by "taking it easy," than by misspent energy.

It is necessary to mark out the plot before starting to dig, and "open out the work," so that the minimum of soil is humped about the garden. The best system is :—



KEY TO DIGGING.

1. Stretch Garden Line across Plot at C. Then cut into ground right alongside Line to full depth of spade blade to divide whole Plot into Half Plots A & B. Remove line, as incision will now be a definite guide.
2. Dig Trench at D to width & depth of spade & throw soil to edge of end G.
3. Proceed to dig Half Plot A by casting soil over into Trench D & repeal procedure until end E is reached.
4. Dig out Trench F similar to D & throw soil into last trench left at end E.
5. Proceed to dig Half Plot B back to End G & fill in last trench with soil that was thrown from Trench D.

Still another detail is to make an incision with the spade around the edge of the plot, thus making a clear-cut demarcation line between it and the boundaries. It gives "finish," and even inculcates a pride in the digger. Such are the methods of the old labourer whom we admire for his ability to take an interest in such a menial occupation.

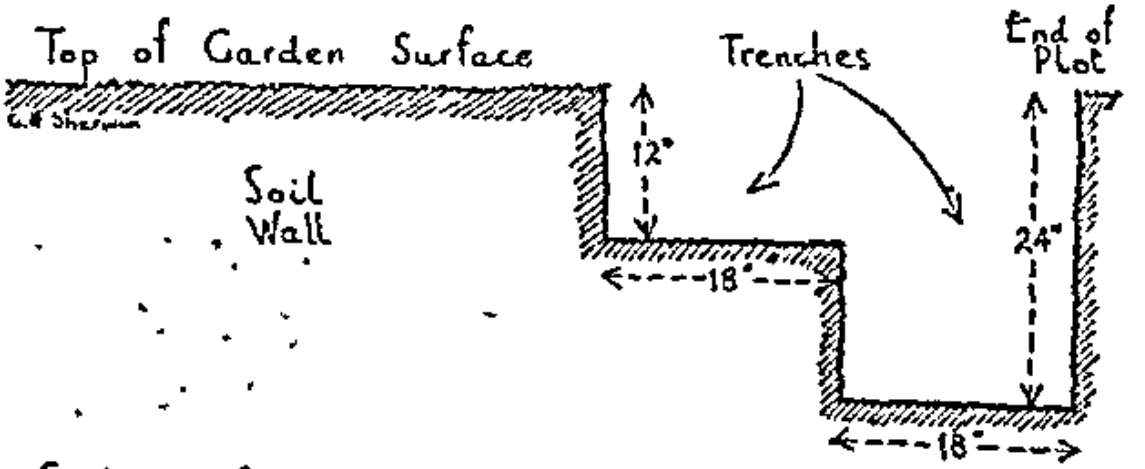
TRENCHING

Whether to trench the garden or merely dig it depends

upon the nature of the soil and sub-soil, the energy of the gardener, and the ultimate use of the site. Vegetable gardens, orchards, shrubberies and herbaceous borders benefit to an important degree when they are first cultivated deeply.

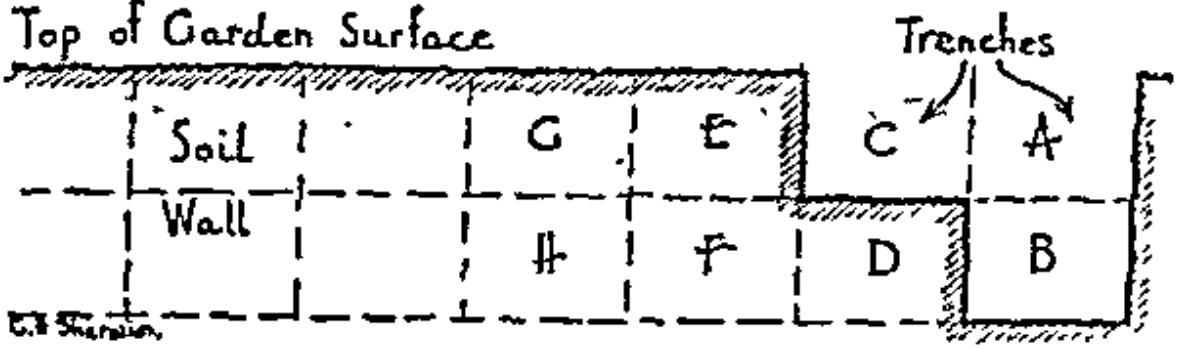
In shallow soils, such as upon rocks, or gravel, or chalk, it does not pay to stir up the bad stuff too deeply, for there is no reason in doing so, unless it is to incorporate manure or compost, or leafmould, to deepen the thickness of fertility. If possible, the procedure should be to go down more deeply each year, and so bring about a gradual improvement. But clayey ground must be stirred up as deeply as the operator can go. His limitation of strength will stop him from going down too far. But it is wrong to bring that bad sticky stuff to the surface. Mock-trenching is the process to adopt and this means turning over the lower part, but keeping it below the upper spade depth, or "spit." This must be carried out methodically, or the digger will quickly get into difficulties.

Mark out the plot in the same way as for digging (see sketch), but instead of only removing the first trench to a depth of the spade blade, it should be 18 in. wide and up to 2 ft. deep, putting all the soil at End G. Then the next strip to the first trench is also dug out to a depth of 1 ft., the side view of the work looking like this :—



Section of Half Plot A (see Sketch) after soil has been removed to End G for trenching.

Now proceed to turn over the soil in the following order :—



1. Move soil from D to B
2. . . . E . A
3. . . . F . D
4. . . . G . C
5. . . . H . F

and so on to End of Plot.

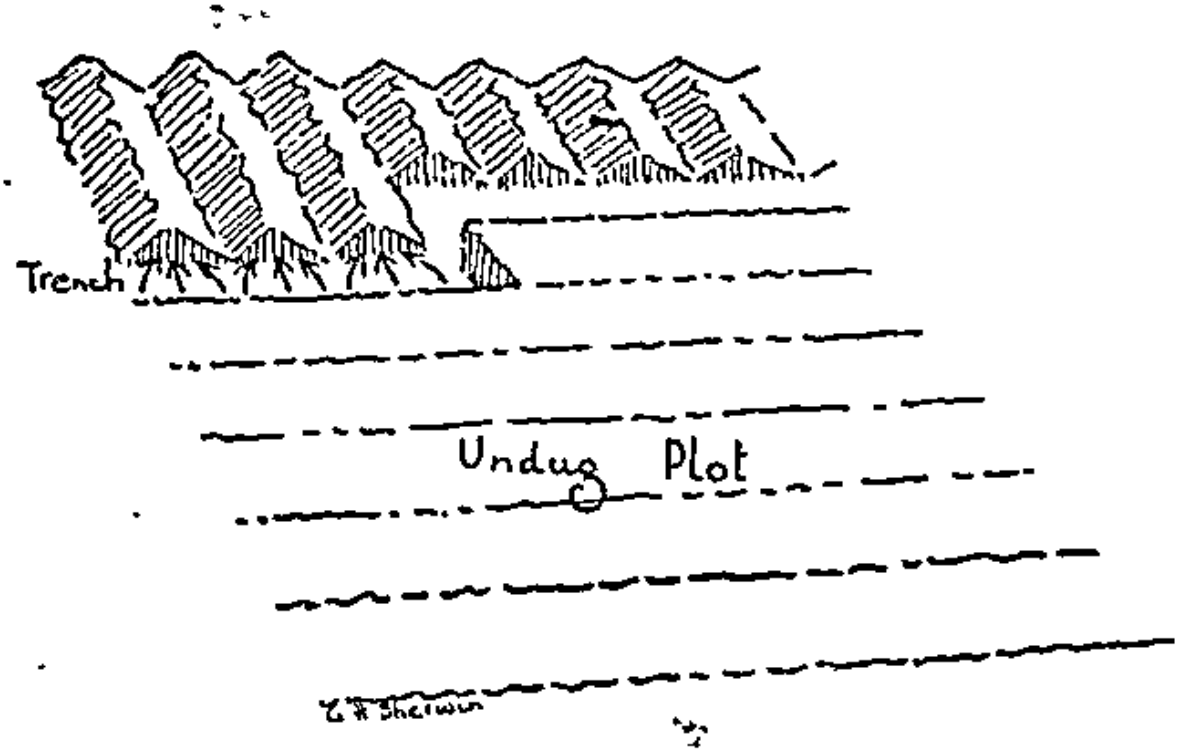
If there is any manure, or other lightening material to work in at this stage, it should be placed between the top and lower "spits," not placing it in a definite layer, as much as stirring it into the top part of the lower "spit."

Ridging

Ridging is another form of digging resorted to with that idea of splitting up the caked surface and making the soil more workable. It is generally done in autumn, before the frosts arrive, and the object is to expose as much as possible of the garden to the freezing process. To do it, prepare the site exactly as for digging, but instead of turning the "spits" over into the trench in the ordinary way they are grouped to form ridges down the plot in the style shown on page 81.

Drainage

There are gardens where these preparatory operations are insufficient to create the requisite drainage and some direct means must be given for the water to flow away. Narrow trenches are dug across the garden, varying in depth from 18 in. at the high end, to as much as 3 ft. at the bottom



METHOD OF RIDGING.

end if there is not much "fall." They should be 5 ft. or 6 ft apart and all lead to the point where the water can flow away. Sometimes a herring-bone system is arranged, with a main drain running through the middle, to which all the smaller side-drains lead. The bottom of the trenches are lined with clay drainage pipes placed end to end, and over them are laid rough clinkers or stones to within a foot of the surface of the ground. They are best put in before any trenching or digging is begun, and then missed when these operations are under way. Sometimes, no pipes are used, the clinkers being deemed sufficient, but pipes are best if not difficult to get from a builder's merchant and the price is moderate, which it generally is.

If there is no natural outlet for the water at the bottom of the garden, a soak-away must be provided. Dig a hole several feet deep, and fill it with clinkers almost up to the top. Cover the surface with soil for appearance's sake.

Forking

A vegetable grower needs a good strong fork for carrying out such operations as lifting Potatoes, forking between the rows before earthing-up, and it can occasionally be used instead of a spade when quick digging must take the place of thoroughness. And, although not as suitable as a proper dung fork, it is almost as useful for collecting rubbish together.

But, for most jobs in the ornamental garden, the smaller type known as a "border fork" is more serviceable for getting between flowers and quickly repays the modest price.

Hoeing

If vegetables are grown it is necessary to have two hoes. The swan-necked type with a 4 in. blade is wanted for earthing-up, or scraping paths, and doing many other loosening jobs. But for clean work in Rose beds, or between seedlings in the vegetable plot, the Dutch hoe, that has to be pushed instead of pulled, is preferred because it leaves a tidy untrodden-on finish.

Raking

A strong rake with teeth 2 in. deep, set 1 in. apart, and is itself about 1 ft. wide, firmly fixed at the back to a long firm handle, will be serviceable for most tasks where it is called for. Its chief uses are smoothing down the surface of new beds, raking off the stones, and breaking the clods into tilth.

Sowing

A garden line is necessary for all sorts of tasks where a straight guide is wanted. It should always be on an iron reel, and also have an iron peg affixed at the loose end. Take care to keep it dry.

For seed sowing, it should be stretched tautly across the plot, and an ordinary wooden peg be used to draw a drill alongside it—if the seeds are to be sown shallowly. For deeper seeds, like Peas and Beans, the hoe can be used for the drill. For Potatoes, it is best to scoop out a shallow trench with the spade.

The essence of good sowing is thoroughly pulverising the surface of the bed before drawing drills. Firstly, prod the top few inches of soil with the fork, knocking the lumps to pieces to the utmost ability. Allow the top to dry, then tread it all over systematically. To do this stand at one corner with the feet close together at an angle of 45° and start shuffling forward so that each foot moves about 4 in. forward each time. When the bed has been gone over, get the rake and briskly scratch it up again. Then, if the surface is still rough, tread it all over again, and repeat the raking, doing it two or three times, until satisfied that a shallow drill can be drawn with a label without difficulty. After drawing all the drills and sowing the seed, a nice smooth rake over will cover in the rows and leave all nicely open and tidy.

Planting

The spade, of course, is used for planting trees and shrubs, First of all, the hole is dug seemingly deeper and larger than is necessary. Then the shrub or tree is held in position to see how much soil must be returned for the base of the roots to sit on in the middle of the hole. It must be the same height as it was in its original home. This is gauged by the earth mark around the stem, that should be level with the surface of the surrounding soil. This settled, more soil is pushed under the outer parts of the roots, and in between them where there are gaps in the cluster. Push it in firmly with the fingers, or use a flat-ended piece of wood to do it. Add and firm soil by degrees, until the roots are all covered and embedded naturally. At this stage, put in a little more soil with the spade and spread it level before treading it down. Practically all trees must be planted very firmly if they are

to grow. When the top of the hole is reached, it is right if it mounds slightly towards the bore of the tree.

Supports

If supports are to be given, such as to top-heavy trees, these should be driven into the ground in the hole before the roots are covered, as closely to the stem as possible, but just clear of any roots that can be laid around the base of the pole, or support. If left till afterwards, there is a danger *of injuring the roots when pushing it into position. Do not* tie the tree to the pole firmly at planting time, in case the roots settle and the pole does not, so graining the subject. Do it a few months later.

Deciduous subjects are planted when the leaves are off. Most evergreens are best transplanted in late September or *April. They should not be checked any more than possible. When returning the soil to the hole, instead of treading at* the stage when the roots are covered, pour in several gallons of water, and allow it to soak for a day or two before completing the operation of filling the hole and firmly treading the top.

Trowel Planting

A shiny serviceable trowel is always being used in any *sort of garden—to plant bedding plants, alpines, Carnations,* and all manner of things. Scoop a generous hole, chop up the soil with the side of the blade. *Put it aside, take the plant* with one hand, arrange its roots comfortably, if necessary, then hold it in position, then push the crumbly soil around it with the spare hand. After it will stand up unaided, use both hands to press the soil down upon the roots with the fingers, taking care not to squeeze the stem. Always press downwards, and press down hard. Finally smooth the surface with the fingers.

The dibble is often used to transplant Cabbage plants, *and seedlings like Canterbury Bells. This tool can be a*

broken spade handle that has been sharpened to a point, the haft of the handle being about 10 in. long. To use it, punch a clean hole in the ground, hold the plant in position with the spare hand, and then punch another hole right against it, so that the soil is squeezed very firmly up against the roots. The beginner is apt to punch obliquely, thus damaging the top of the plant stem, and at the same time leaving the bottom part improperly firmed. If a plant can be pulled out with one leaf, it is not firm enough. If the leaf breaks, it should be all right.

Watering

Generally, there is not much watering to do in a well-cultivated garden. But if it is necessary to do it, it should be carried out thoroughly. A tree needs gallons to get down to the roots, while plants need almost as much. A drench or nothing is the rule for established subjects.

But, the watercan must often be used at planting time, especially when trowelling, or dibbling is carried out in dryish weather

When a dibble is to be used, pour water at the right spot, leave it for an hour, then dibble in the plant, and pour more water into the secondary hole made by the dibber.

Where a whole bed of Asters or some such bedding plants are to be put in, drench the soil a day before planting. Give another soaking a day after planting, if necessary.

When to, and when not to, give water is often discussed. If given in the evening it soaks into the ground instead of evaporating into the atmosphere. If it has been exposed to the air a few days or hours before use it has acquired the same temperature and is less likely to chill, or scorch, than when brought direct from the tap, or boiler. Where soft water can be got, it is best.

CHAPTER X

FERTILITY

The small gardener must know a few essential facts about manures and fertilisers and endeavour to overcome the great problem of maintaining the fertility of the soil. In the first chapter a reference was made to micro-organisms and how they live upon decayed vegetation, converting it to the state whereby plants can absorb it into their systems. A rich garden is full of humus. We must supply the raw materials.

In the days when most small gardens are far removed from the farmyard, we resort to every conceivable device to remedy the defect. Let us consider some of them.

Compost

Composting the refuse of the garden is the most economical and efficient process for regeneration. *All* lawn mowings, soft hedge-clippings, old cabbage leaves, pea haulms, and weeds are collected together and scientifically treated so that there is a quick decomposition, and the decayed results may be dug into the soil within a few months. There are several methods of doing this. For instance, some schools use sulphate of ammonia; others use herbs; and, in my own case, I mix my refuse with a little obtainable farmyard manure, earth and lime. *But the small gardener has no time* to deal with his meagre returns by elaborate methods. His best course is to buy a proprietary compost accelerator, study the directions and fulfil them to the letter. Packets of "Fertosan," "Adco," or "Garotta" are sold by any good horticultural sundriesman and these will include valuable information and directions, as well as the impregnators for the job. Not only does compost add to the fertility of the soil by increasing the humus content, it also improves the texture, thereby making cultivation easier, and it also contains a goodly proportion of the minerals

Not only can Climbers increase the interest when trained up walls and fences, they will alter the whole character of the common Lean-to to a house This Rambler over the roof is the well known yellow Banksian Rose It is a vigorous grower

The Steps, Path and Seat in this picture have obviously been planned with much care and good taste, the modern architectural background being the dominating factor The varied assortment of Plants have also been chosen with the utmost care

The handsome Vase is the focal point in this picture Being filled with Irises gives it a definite reason for being upon the Dry Wall that retains the well-trained Hedge The hedge in turn gives the perfect background *Incidentally, the pattern of the paving in the wall is a good one when* dealing with various thicknesses

If there is a fault with the placing of the Sundial in this picture it is that it is unlikely to have the sun shining upon it throughout the day However, the Crazy Paving interplanted with Creeping Thymes, the Weeping Standard Roses and the Hedge all combine to make a lovely corner

that plants need—obviously—for the previous plant life took them from the soil.

Regarding the other materials we add to the soil, excepting farmyard manure, which is nearest to perfection, few of them are as balanced as garden compost. Some have only a beneficial effect upon the physical nature of the soil while others supply minerals, as do artificial fertilisers, and some give humus without much strength, as does leafmould. Which of them to use depends upon the state of the soil, the purpose, the availability, and the price.

Leafmould

Leafmould is excellent material for lightening the texture of the soil, balancing the moisture content, and providing humus, but it does not contain many minerals. It is generally too expensive to buy in large quantities. (It has been quoted at 4s. 6d. per bushel, or 75s. 0d. per yard, screened.) But, even at a high price, it is worth getting for special purposes, such as mixing in the soil for a special plant in the rock garden, or for potting compost. However, if it is available in the locality, and the cost is moderate, it should be dug into flower borders, and in the cultivated garden where good flowers are grown, like Dahlias and Chrysanthemums.

The best way of using it is to spread it over the surface and fork it in during early spring. If, for example, the prescribed autumn digging, or trenching, is carried out, the top of the ground is fairly workable in spring, and it is then time to spread and fork in the leafmould.

But coarser stuff, such as rotted manure, or composted rubbish, should be incorporated with the soil when the autumn upheaval is done. When digging, it can be spread over the surface beforehand so that it gets "turned in." If trenching is being carried out, the materials should be stirred into the ground several inches below the surface. You can hardly use too much, if it is well mixed in the soil.

Peat is often advocated. Unless one can be sure that the sort offered is the best, it may be too acid. If there is proof

of its suitability it can be added to shrub beds, or where trees of all sorts are to go. There are specially treated forms of peat that are also excellent for ordinary rock garden use.

Hop manure is somewhat akin to leafmould, but with not quite so much lasting power. Some of the branded hop manures have been enriched with other fertilisers, which is shown by analysis figures displayed on the packages or *given in the particulars. These are a good medium for adding* minerals and nitrogen to the garden.

Charcoal, soot, rape dust, and castor meal also give benefit to plant life by supplying a smallish steady release of humus *and foods. Very often the price is too high, but if thought* reasonable, such commodities are valuable.

Coal Ashes

There is a prevailing idea that coal ashes are bad for the soil. I would not use them on light ground, but cannot get enough where clay is present. I always attribute the traditional *excellence of cottage gardens to the fact that they* have been impregnated with lots of open-fire coal ashes. They are particularly good for lightening the texture of a prospective site for a lawn. They make the earth porous, assist drainage, and even give a little sustenance. Autumn is the best time to apply them. When trenching they can be forked into the bottom of the trenches, or when digging, *they can be scattered over the surface afterwards and left* to weather until being prodded in several weeks later. This will ensure that all poisonous fumes, or burning propensities have been "killed" before plants come in contact with them.

As a matter of fact, I often spread ashes over Delphinium crowns in late autumn, after the foliage has been cleared away, to discourage slugs. Many failures in a garden are due to slugs eating away the crowns in muggy mild autumns, and this treatment is a deterrent.

Lime

Everyone should know a few facts about lime. For nearly

everything in the small garden it is essential, although in a few instances it is a fatal mistake to apply it. It is all a matter of acidity and alkalinity. Members of the Rhododendron family, and some Lilies, as well as certain rock plants must have acid soil in which to thrive, and the presence of lime is fatal. Such as these are most easily grown in particular districts, such as the west of England, or the Bagshot area of Surrey. However, nearly all vegetables, some fruits, and the majority of flowers prefer alkalinity, which means that lime must be provided.

Lime will assist in breaking down clayey soil to an amazing degree. If, in the autumn, immediately after trenching, it is scattered over the rough surface at the rate of half a pound per sq. yard, it will sink down into the mass and create the same sort of conditions that frosts make, i.e., pulverise the clods and make the clay flocculate.

In this way, it oxygenates the soil and increases the organism activity.

Lime also re-acts upon the other constituents of the soil by breaking them down and making them available to the plants. It hastens the decomposition of manure and compost, and for that reason, it is often unwise to use it too freely, for the goodness flows away when it is released far more quickly than it can be absorbed. It is for this reason that we seldom mix manure and lime together. Instead, we apply manure in one season, and lime in the next. Once there is plenty of lime in the soil heavy dressings should not be given willy-nilly. A light dressing every third year will be enough. If this is done between manurial applications the happy balance is maintained.

The best form of lime, of which there are many, for the small gardener to use is that known as "hydrated." It can be bought in strong paper bags, similar to those used for cement.

Fertilisers

The judicious application of fertilisers is very important

in large market gardens and places where there is a profit motive, but the small gardener need not possess the profound knowledge necessary to mix them in the correct proportions. This involves analysis of the soil, demands of the particular crops, and a study of the peculiar conditions. But he should know that there are three main elements upon which plants thrive. These are phosphates, potash and nitrogen. Some crude fertilisers supply one thing, some another, and some, two of the elements. "Complete Fertilisers" are mixtures embodying all three elements. A general mixture is calculated to be suitable for the average plant needs. But plants differ in their preferences and so it often pays to obtain a concoction that *is specially suitable for* Roses, Sweet Peas, or whatever the subject is. Good fertiliser *firms mix these scientifically and packet them in suitable* sizes to suit all users. They are far better than dabbling in *home-made mixtures.*

But we do occasionally use a crude one-object fertiliser. Sulphate of ammonia supplies nitrogen, and it is useful by itself for stimulating grass, or greenstuff, or even in hastening hedging plants, providing it is used in minute quantities and the conditions are right. As an example of this, lime should be present in soil where sulphate of ammonia is used, or, instead of the nitrogen being released, acidity and sourness result, and the result is stagnation. But if lime is present it mixes with the sulphate and "fixes" the ammonia, thus making it available to the organisms that convert it into *soluble nitrogen for the roots to absorb.*

This is merely stated to give an example of the complications of fertiliser action. The reason is to show that the unknowledgeable cultivator should endeavour at all times to be reasonable with "artificials" and aim at a moderate all-round treatment, instead of thinking that excessive doses of this or that will bring about wonderful results.

Another rule to heed is never to give large doses of manure or fertilisers to sickly plants. Very often, a slight stimulant may bring an improvement, but it is the healthy plants that can absorb rich food with the utmost composure.

One thing that the amateur should know is the difference between an "organic" fertiliser, and a "mineral." Organic fertilisers are those that have been derived from animal or plant life, such as bonemeal, or rape dust. Minerals are manufactured from all sorts of things. Sulphate of ammonia, for instance, is a by-product of the gasworks. Although organic fertilisers have not the quick effect, nor are they as powerful, they are safer and add, in a more or less degree, to the humus content of the soil. They are "safe" and it is for this reason that emphasis is often put upon "organic" in advertisements of fertiliser manufacturers.

One form of manure that you may have available is chicken manure. This is rich in phosphates and nitrogen, and can be dangerous when used before it is semi-decayed. Store it a while before using it sparingly in the vegetable plot. The best way to ensure that it will do the maximum good is to add it to the compost heap.

CHAPTER XI

FRUIT

Apples, Pears, Plums, Peaches, Nectarines, Apricots, Cherries, Figs, Strawberries, Gooseberries, Raspberries, Loganberries, Black Currants, Red Currants and White Currants, are all possible fruits to include in the restricted space. But you must make your choice of a few, for it is impossible to include the lot without having a glorified wilderness. Perhaps a few essential particulars about each of these will help you to come to a decision.

Apples

Of all the tree fruits these are the easiest to manage, and the most easy-going as far as soil is concerned. Nevertheless, it is possible to have trees that will never bear fruit

for several reasons. If the garden is in a frost pocket the blossom will be destroyed every spring. If the varieties are individually sterile, they will just blossom and that is all. If on the wrong root stock, the trees will grow to alarming proportions and there will be no returns. Let us guard against all these things.

Very often, a frost pocket is due to the garden being completely enclosed, or exposed to the north and east, but with no outlet to the south and west. When that is the case, one of the things to do is to buy small trained trees that can be covered over during those few dangerous nights that generally arrive in the blossoming period. It is the pollen that is affected, and it must be protected.

The nurseryman grafts the fruit scions on to roots that have come from Crabs, or various types of what are known as "Paradise" stocks. There are several numbered sorts of the latter; I prefer No. 9, but I understand that No. 1 and No. 2 are also good for dwarfs. These Paradise stocks are noted for producing trees that fruit early in life and do not grow to large size, although they may not live as long as those tall bulky trees seen in large orchards.

It is well known, now, that certain varieties must be interplanted with others in order that there is good pollination. There are also a few varieties that are less difficult and these are the ones to select for small gardens.

The supreme dessert Cox's Orange Pippin is difficult. I would prefer to ignore this and choose from the following that need less consideration. Laxton's Epicure is a nice dessert ripening in September. James Grieve is very popular and ready to eat a week or two later. Ellison's Orange is a sure cropper and ripens about the same time. Orelans Reinette should be planted where there are late frosts prevailing, as it blossoms late and often misses the bad period. Laxton's Superb is somewhat like a Cox's and is in season from December to March.

Grenadier is a glorified Codlin apple that can be cooked in August. Lane's Prince Albert will keep till Christmas. It is my favourite apple, although the habit of growth is some-

what weak. Newton Wonder is an excellent keeper. Crawley Beauty is a keeper that blossoms late and is advocated for "frost-pocket" gardens.

SHAPES OF TREES.

Espaliers and Cordons are suitable for walls or fences. Bush trees and Espaliers should be planted about 12 ft. apart. Cordons can be put as near as 2 ft. Cordons are the ones to plant for quick returns, and they can be arranged in oblique formation where there is insufficient height for them to grow upright. If supports are more than 8 ft., plant them upright—if 8 ft. or less, plant them obliquely.

Incidentally the details given about wires for Climbers in Chapter 6 will be very useful when considering trained fruit trees.

The average price today for good trees of all fruits is a pound apiece, while three and four tier Espaliers are considerably dearer.

Pruning

There is much controversy over pruning fruit trees, but no one argues that they do not need pruning. In my opinion, the winter pruning of small trees is enough, especially in the first years. This consists of cutting away the new lanky shoots that have formed during the summer almost to where they began, leaving three or four basal buds upon the new wood. But the end growth is only shortened by about a third of its length—more or less—in proportion to the

symmetry or shape of the tree. Each shoot must be cut off directly above an eye, or rot may start. We generally begin to prune in late November and try to get it finished before the spraying season.

The chief thing to know when pruning is how to distinguish the wood shoots and buds from the fruiting spurs. These fruiting spurs are somewhat similar in shape to the back toes of chickens feet, while the tips of the longer fruiting shoots are squat and stubby, instead of being thin and whippy, as are the leaf or wood-producing shoots.

Another point to bear in mind, particularly on bush trees, is that the new shoots of the next season will break from the end buds that are left, therefore, if you want to have the branches grow in certain directions, prune them so the end buds point those ways.

Those, roughly, are the main rules for pruning. There is a lot more to learn, but experience and observation will teach you that. In these days it is often possible to see a demonstration, for nearly every County Council has experts busily doing this, so important has fruit culture become, for the benefit of the nation.

Planting

The general rules for planting are given in the chapter dealing with Operations. When planting apples in particular, see that the soil around the bole is well moulded up so that the water does not soak into the base and cause rot. Only in extremely sandy soils, where drainage is brisk, should there be a depression over the roots. In heavy ground it is a good plan to have the tree growing from a slight mound—as it were.

Dwarf apple trees also grow better if fed—after being established. Sometimes, a little manure prodded into the surface will do good. Some seasons, dressing of sulphate of ammonia will induce growth in sluggish trees. Sulphate of potash, forked in during winter, will improve fruit colour and make the trees more healthy.

Spraying

The market growers spray their trees every winter with Tar Oil, or some modern concoction, such as D.N.C. (Dinitro-Cresol). This is to control the many sorts of pests that are fond of apples. Grease Bands are also applied in autumn to catch the moths that crawl up the trunks, but these are impracticable upon small trees, and so the winter-spraying should never be misssed.

In the spring there are other sprayings to control the scab that gets upon the fruits; immediately before the blossoms open and just afterwards. Lime Sulphur is frequently used, but there are proprietary emulsions far safer, if the directions are adhered to. Notes about them are invariably given by gardening correspondents and there is no need to elaborate upon this theme here.

Thinning the fruits is often ignored by amateurs. By drastically snipping off many of the young fruits during a heavy cropping season, the size of those left is improved, and the operation does induce the trees to bear regularly, instead of being overladen in some seasons and barren in others. The trees naturally cast many young fruits in June. By thinning them still more in that month, and in early July, you are only extending Nature's method for your own convenience.

Pears

Pear culture is similar to that for apples, but they are more difficult to bring to perfection. The attentions, although the same, are more subtle, and must be modified according to the behaviour of the varieties and the trees.

Pears are more pernickety. They like moisture and yet plenty of drainage. Lightish soil undoubtedly suits them best, although I have seen them flourishing in almost pure clay. They also like plenty of warmth, and the best fruits come from cordons or espaliers trained to a wall facing south or west.

As with Apples, stocks and strains are important. Those raised upon Quince Stock are the dwarfest and best.

They also have their pollinating troubles. Doyenne du Comice needs suitable companions, such as Laxton's Superb —an early variety, and Winter Nelis—a smallish delightful pear that will ripen in December. If only one or two trees of one variety are to be grown, the sort to select is Conference, that is self-fertile. It, like Doyenne du Comice, is ready to eat in November.

Spraying, pruning, training, and feeding must be carried out carefully. Some trees produce hardly any wood, and bear a few heavy crops, only to fizzle out. Others produce plenty of growth, but show little inclination to fruit. The slow growers are given plenty of nitrogenous manures and fertilisers to help make them grow, while for the shy fruit-bearers, we withhold nitrogenous fertilisers, substituting phosphates and potash.

Very often, sickly trees are only suffering from lack of moisture. A good watering in dry weather will make all the difference, as will frequent forceful sprayings of the foliage during dry spells, this being done in the evening.

Thinning the fruits is imperative.

Putting perforated bags over the individual fruits will keep away birds in the later stages, as well as save premature dropping on to the ground. Late Pears must be kept upon the trees just as long as they will hang. The earlier sorts have to be gathered and stored in a cool place to ripen. The trouble with these early varieties is that, unless ripened nicely, they go " sleepy " and are disappointing.

To sum up, the amateur is advised to start growing Apples before Pears, in order to obtain confidence and experience. Also, a study of a good book upon the subject is advisable, seeing that its cost is much less than that of a single tree. It is a fascinating fruit to grow—once you get the knack of it.

Plums

The best type of plum to grow in a restricted space,

undoubtedly, is the Gage. A few of the choicer, ordinary Plums are likewise suitable for training to a definite shape, but the majority thrive best when given a lot of room.

There are several sorts of stocks upon which the nurserymen graft the varieties. If possible, get those that have been propagated on to "Common Mussel," as they are less vigorous than those raised on "Myrobalan."

Plums will grow on walls facing all aspects, but we generally prefer to reserve the sunniest positions for choicer fruits, like Pears and Peaches. For walls facing east, the selection is Comte d'Althan's Gage, Coe's Golden Drop, Bryanston Gage and Monarch. For west aspects Early Transparent Gage, Oullins Golden Gage, Dennistoun's Superb, Jefferson Gage, and Victoria. For a north aspect River's Early, Victoria, Monarch, and Oullins Golden Gage. For a south aspect, Early Transparent Gage, Dennistoun's Superb, Coe's Golden Drop, Golden Transparent.

The best shape for all these wall trees is that known as "Fan-trained." The branches spray out from a short bole in all directions like the ribs of a fan. Most sorts will cover a 12 ft. stretch of wall.

It is also possible to grow these trained trees against wire fences. Bush and standard trees, too, will grow in the open garden. Although not often thought about, a nice standard plum can make a specimen tree on the front lawn. It will bear its blossoms in due season, and, in addition, bear useful fruit. A good variety for this experiment would be Czar; Victoria is too straggly.

The roots of Plums are nearer the surface than are those of Apples and Pears, therefore, they need friable rich soil. This generally means the free use of compost and manure in the years preceding planting. A little lime will aid stone formation.

The pruning of Plums is somewhat difficult on account of the silver-leaf disease that will often attack open wounds. Generally, this is countered by summer pruning. In early August, all but the leading shoots are shortened considerably. These are again cut back in March—if necessary. A close

lookout should be kept for dead wood; training new shoots in the vacant places. As with Apples and Pears, the chief point is to watch for fruiting shoots, as against wood-forming shoots. The fruiting buds are in multiple formation; more plump than the others. If any old wood is cut out, the wound should be immediately dressed with white lead paint to lessen the risk of rot or disease entering the tissues.

A winter spraying to control aphis should be a routine affair.

We rarely bother to thin the fruits. One other likely bother is that suckers will grow up from the roots. Remove these directly you notice them.

Peaches and Nectarines

In my opinion, outdoor Peaches and Nectarines are far more easy to manage than Pears, or even trained Plums. They need nice friable soil and a warm wall, it is true, but given these conditions, are easily managed. There is no fertilisation trouble, neither need we worry about stocks.

Of the two, I would grow Peaches, rather than Nectarines, for I find that Peaches "finish" best. The best varieties of Peach are Alexander, Hale's Early and Peregrine. Of Nectarines, the best outdoor sorts are John Rivers and Lord Napier.

The shape of the trees is invariably "Fan-trained." This is because fruits are borne on the one-year-old shoots, instead of upon spurs, as with Apples, Pears, and in a lesser degree, Plums. Often the, nurserymen will send out trees with a perfect spraying out of branches. I like to remove the one or two branches growing in the middle part of the tree, thus making a central gap, and causing the side branches to spread and fan out more than they would if all the goodness is taken by these central branches.

There is no pruning in the accepted sense. If you watch a tree develop, you will see, just after flowering, when the fruitlets are setting, that new shoots will begin to appear

from the buds. They are most always so numerous, that if allowed to grow they would simply develop into a thicket.

So these are regulated by rubbing off those that are unwanted. Those that emanate from the front of the branches, or directly behind, are rubbed, while those that start from the sides, thus being suitable to tie to the wires, are left. Enough should be retained to cover all the space when placed about 5 in. or 6 in. apart. As they grow through summer, so they are loosely tied to the wires. In the New Year, the trees are completely released from their ties and re-trained into position. First of all, the main branches are fixed in symmetrical order—3 or 4 in each half on either side of the main stem. Then the subsidiary branches are tied in, finally placing the sideshoots of these where they will go to the best advantage. If there are too many it often pays to remove entirely a subsidiary branch, especially if it contains weak or few new shoots. The whole object is to have a good network of young shoots growing from the minimum quantity of old wood.

In late January, or early February, spray with Bordeaux Mixture (obtainable from a horticultural sundries store), according to the directions, or use a proprietary colloidal copper wash, such as Buisol. It checks the worst enemy of outdoor Peaches, a bother known as "Leafcurl" that makes a horrid-looking tree.

When the blossoms open, they should be protected from frosts. They arrive earlier than other fruits and often escape the late spring frosts. Nevertheless, we sometimes get frosts when they are open, and we must be watchful.

Drastic thinning of fruits should be carried out. This begins when they are small, by picking off a large number. Others are removed at spasmodic intervals, but the final thinning is not done until after stones begin to form. If some of the larger fruits are cut in halves, this can be ascertained. At this stage, give the final thinning so that there is one well-placed fruit for about every square foot, or slightly less, of wall space covered by the tree. This may seem

incredible, but it is the only way to have those large luscious fruits, as sold in fruiterers, shops.

Other necessary cultural attentions are to mulch the ground over the roots with strawy litter, or compost each March, give good drenchings with water in dry times, and feed with Nitro-Chalk and Sulphate of Potash, at the rate of about an ounce of each over every square yard, during each winter. An alternative is to use a special fruit fertiliser.

Apricots

Apricots are treated somewhat like plums and need much the same conditions in all respects except aspect. They must have warmth. They are seldom satisfactory and not recommended.

Cherries

Sweet Cherries are very difficult unless they are known to grow well in the neighbourhood. They have pollination troubles and doubtful unless the grower is a knowledgeable cultivator, in which case, these notes are unnecessary.

But the Morello Cherry should be in every garden. It is ideal for training to a wall that faces north and will flourish where other subjects will die of distress. The method of training is precisely the same as for Peaches. But there is no need to worry about Leafcurl. There is no need to write much more about it, except that one possible worry is an infrequent attack of black flies, that will ruin the trees if not sprayed with a good insecticide. I like this fruit very much. It makes a handsome tree, gives lovely blossoms, and the fruits are most welcome.

Figs

Figs are doubtful. When grown successfully, they are given treatment somewhat the same as for Peaches.

Strawberries

Strawberry culture is feasible in a small garden. They flourish in precisely the same soil as where vegetables will grow and should be included in the rotation scheme. There should be three sections of a Strawberry bed—or three separate beds. A new one is planted up every year with fresh runners, while the oldest is destroyed. We generally remove the blossom from the one-year-old plants in order that they shall fully develop for the grand crop in the second year. But, at the same time, we take some of the runners off them, that will make the newest beds. Therefore, off the one-year-old plants we get no fruit but the stock of runners for the new bed, on the two-year-old plants are borne the chief Strawberry crop, while a very useful crop is obtained off the three-year-old plantation, after which a clearance is made.

If you have 6 rows of Strawberries (two new each year), they will take a 15 ft. breadth of plot, the rows being 30 in. apart. The plants within the rows need to be about 18 in. asunder. In the first year, just after the early autumn planting, it is possible to grow other vegetable crops between the rows, such as autumn-sown Onions. However, plenty of room is the order of the day for Strawberries—in fact almost everything.

Cultivation includes taking the layers in July by pinning them down on to small pots of soil so that they can be transplanted later without root disturbance. Hoeing has to be done frequently. Litter or straw has to be provided in early June, to stop the fruit from being splashed. An occasional dressing with a proprietary fertiliser each spring improves the crop. Nets have to be provided to keep away birds. If 6 rows are grown, enough netting is only wanted for 4 of them—if the proper system is adopted. When buying netting, do get the square-mesh, even if it seems dearer. The diamond type is difficult to stretch over the bed.

Plants are comparatively inexpensive. A hundred can be bought for 30s. 0d. Royal Sovereign is the best variety.

The Government issues certificates to nurserymen whose stocks have been inspected and are found free of strawberry troubles.

Gooseberries

A few Gooseberries are excellent. They need little attention and will grow in almost every sort of soil. The bush form is the least worry, for only an annual thinning of the new prickly shoots is necessary. Another interesting method is to train the trees up a wire fence to form what are known as "triple-cordons." This is brought about by early training. All but three of the shoots are drastically shortened, while these three are tied into shape to resemble the business end of a giant's toasting fork, the handle part being thrust into the ground to within 6 in. of the base of the prongs. The advantage of such trees is that the fruit can be gathered more comfortably, and they take up far less room. Trained trees can be bought, but it is far more economical to purchase two-year-old bushes and deal with them yourself. Bush trees are a shilling or two apiece.

There are hundreds of varieties. My favourites are :— Lancashire Lad for red berries ; Leveller for yellow berries Keepsake for green berries and Careless for white berries.

The bushes need a dressing of potash now and again, and the new shoots should be shortened each early spring so that the hands can be placed down between them to gather the fruits. Remember that drastic pruning brings fewer but larger fruits, while no pruning means dense bushes with myriads of small berries. The medium course is the best policy.

Black Currants

The most useful fruits of all are Black Currants. Bushes are cheap ; they will grow in any good soil in almost any position, and need little attention. The chief cultural point is that the fruit is borne on the newest shoots. There is no

pruning, but some of the oldest branches are completely removed at the base. The more stems that come straight from the root the better it is. A routine spraying with lime sulphur when the leaves are just breaking is a check to the chief bother—a pest that causes "Big Bud."

The best variety for the small garden is Boskoop Giant. Bushes need to be spaced about 4 ft. apart.

Red and White Currants are good crops. These differ from the Black, in that they, like Gooseberries, should only have single stems at the root end. They can be pruned just like Apples and will form compact bushes. The fruits are borne on spurs, and upon the base of the new shoots—in contrast to the black varieties. There is no other special cultivation necessary for them. Of course, all fruits need feeding with manure or suitable fertilisers and these are no exception.

Raspberries

There is no reason why Raspberries should not be included —other than lack of room. Plants consist of single canes with a bunch of roots at the bottom. These are spaced about 15 in. apart in a straight row. If more than two rows, these should be 5 ft. asunder. Immediately after planting, cut back the canes to within 6 in. of the ground to make the roots throw up new growths, rather than bear fruits that will weaken them. In the next winter, erect a wire support to tie these new canes to. Fruit will arrive upon them in the summer. A further lot of suckers, as it were, will also appear. After fruiting is over, the old canes are completely cut off near the ground and the newest shoots are tied to the wires—in their places. A healthy plantation will last several years if the ground around and over the roots is mulched with compost and a few fertilisers given occasionally. The chief need of Raspberries is a free root-run that is neither too moist, nor too dry. This is brought about by good cultivation beforehand. Once the bed is established little can be done,

for the fibrous roots are very near the surface and it would be folly to disturb them.

The best variety is Norfolk Giant. It, like Gooseberries, should come from "Certified Stock."

Loganberries and Blackberries need precisely the same treatment as Raspberries. But they need much higher supports, and they like much more room. It is just possible to use these as subjects for tall pergolas. I prefer not to put up with the inconvenience they cause.

Fruits have been given more space in this book than they will probably occupy in the garden. But that has been done in order to give you an idea of what is needed if you intend to develop this side of the hobby.

CHAPTER XII

VEGETABLES

The growing of vegetables needs more skill and attention, spread over the months, than any other section of gardening. Labour is the chief expense—if it has to be paid for. Manures and fertilisers entail some cost, while seeds, and perhaps plants, have to be budgeted for upon a modest scale. I definitely say that it is unprofitable to grow all the household vegetables with hired help, but this part of the garden can be profitable when the owner does all the work.

Where only a few rods are utilised for produce it is well to grow those sorts that need the kind of attention that cannot be given by mass-production efforts. For example, maincrop Potatoes, most of the Root Crops, many of the greenstuffs, and Celery, are grown by farmers by the acre, the result being that they are plentiful and cheap and can be bought from the corner greengrocer at prices, and qualities, that will startle you when you make comparisons.

There are a few perennial crops that should be grown in the home garden because they are expensive to buy and

are fresher than the shop brands. Asparagus, Globe Artichokes, Rhubarb, and some of the Herbs are always welcome, and the attention they need is of the sort that the amateur can give.

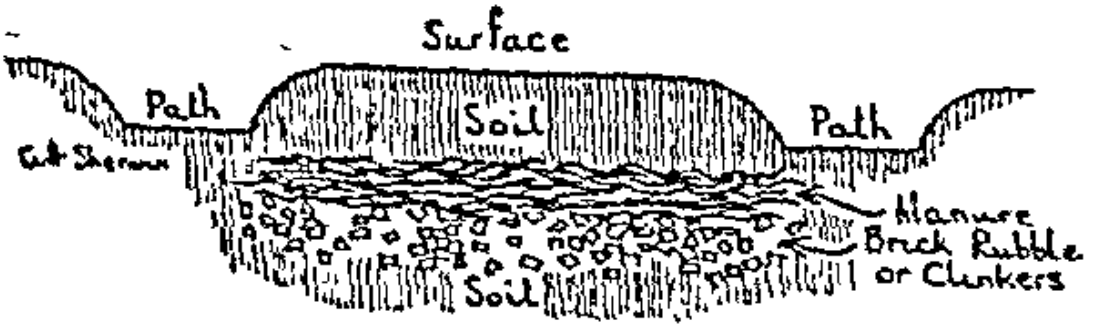
Asparagus

A small Asparagus bed will yield many stems every spring for a dozen years, providing it is made properly and given the requisite care. The making is the hardest and most costly part of the proceedings. It is a sort of long-term investment.

The best position is a fairly open one, preferably at the side of the vegetable garden, so that it does not interfere with the rotations scheme and the digging of the plot that bears annual crops. Beside a dividing path, or alongside Gooseberry bushes, or other dwarf permanent plants, suits it very well.

Much depends upon the nature of the sub-soil as to whether a bed is made elaborately or not. Asparagus needs plenty of richness, plenty of drainage, and yet plenty of moisture. If the subsoil is light and chalky, or sandy, or gravelly, drainage is assured, and it is well to dig in plenty of manure and compost to give the richness. But where there is clay, or the garden is low and swampy, a good foundation has to be prepared.

Of course, you all know the raised-bed style for Asparagus beds, with channels in between like this :—



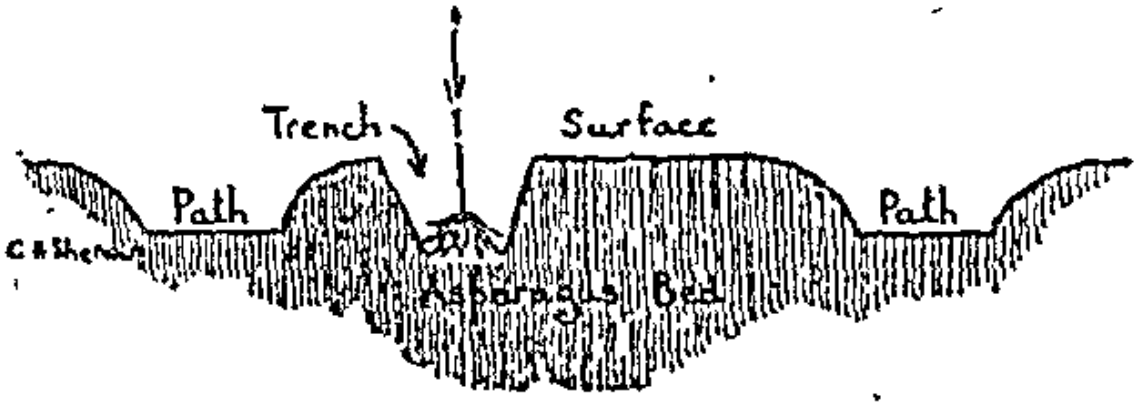
The above, you will see, has a brick or clinker foundation, a layer of manure, and then soil on the top. This is how it should be when the sub-soil is bad.

To make such a bed, you first of all mark off the site, allowing for a footway upon either side, or between, if there are two or more beds, and stretch the garden line around the actual edge of the first one. Then the earth is dug out to a depth of 18 in. and thrown upon either side. The bottom is shovelled out, leaving a large excavation to the requisite width. Some growers make this 4 ft. 6 in. wide to accommodate three rows of plants. Others make it 3 ft. wide, and plant only two rows within it. The narrower bed is more easy to manage and the actual work involved is much less. Whatever the width a lot of work is essential if the results are to be of the very best.

The floor is then covered with clinkers, or old brick rubble. Such stuff as rubble from bombed buildings is ideal, it being necessary to break it into small lumps. A 4 in. layer should be the minimum. On this is laid plenty of rotted compost, or decayed manure. The soil is then returned, making a formidable bank. If this is done in autumn it can be left until January to settle down. In January, if it can be managed, some more decayed manure or compost should be spread over the top and be dug in with a fork, mixing it as much as possible to the depth of the tines. Now leave it again until early April.

Asparagus plants are sold as "two-year-olds" or "three-year-olds," the price being about sixpence each. They should be planted in two rows, in the narrow bed, 18 in. apart, and a foot asunder in each row. This should always be done in early April because Asparagus roots are very sensitive, and will probably die if moved at any other season. Even now they should be kept moist all the while and should arrive in damp moss, or be obtained from a local nursery, where they will not suffer through delay. The roots are thongy and look like giant spiders. They need to be planted carefully, it being almost impossible to do it in the usual way. Plant one row at a time, and do it by digging out a V trench 9 in.

deep, where it is to go. Then fill in the bottom of the trench to form a ridge along the bottom in this manner :—



Now place the roots along this ridge, with the thongs sprawling down each side, and pull the soil over them with the trowel, doing so rather firmly. If at the right depth the crowns will be just below the surface after all is levelled down. Give them a watering to settle the soil down between the thongs, and rake the surface again. If the weather is dry, water them again during that summer.

Do not cut any of the growths the first year. In the second year a few can be gathered if they are strong. In the third year they can be cut fairly hard between late April and during May. They are removed by inserting the knife blade just under the soil surface. None is gathered after early June, the following growths being allowed to develop into the tall feathery foliage.

Routine treatment consists of cleaning off the foliage in autumn when it is quite yellow, dressing the surface with compost, and covering this with a layer of soil shovelled out of the pathways. In spring, rake off some of the soil and manure into the pathways and, in early April, give a liberal dressing of agricultural salt.

The chief causes of failure are bad planting, and excessive dryness, or, alternately, excessive moisture. The drainage should prevent the latter, but in dry times, one should never hesitate to use plenty of water.

As Asparagus cultivation is a first-class interest for an amateur, it has been described in considerable detail.

Rhubarb

If Rhubarb gets fairly rich soil it will grow almost anywhere without a lot of attention. Buy the roots in spring, and plant them about 3 ft. apart in all directions, so that the crowns just peep out of the surface. The cost is 2s. 0d. per root. Do nothing except water them in dry weather during the first season. In the next April a few sticks can be pulled, but it is best to resist the temptation as much as possible. In after years, they can be pulled more closely, but never on any account rob the plants of stalks after the beginning of July.

An occasional dressing with a phosphatic fertiliser in spring will keep them healthy and vigorous.

Blanched stems are possible from established roots, by covering the crowns in late January with pails, or large pots, or boxes, and smothering these with bracken or similar litter. Keep the interiors absolutely dark. Examine frequently to see when the sticks are ready to pull. It is well to semi-force half the bed in alternate years. Lift, divide and replant every fourth or fifth year. Remove all seed stems before they develop.

There are many varieties, Early Albert and The Sutton being excellent.

Globe Artichokes

These are elegant plants and the thistle-like flower heads are a household delicacy, when gathered and cooked just before blossoms appear. Rich soil and a sheltered position suit them. Young plants that are actually offshoots from old specimens are bought for about 1s. 6d. each, in April, and inserted in the bed about 3 ft. apart in all directions. In the first year, remove all seed heads before they develop, in order to strengthen the roots. Start cutting the almost mature heads in the second season. Mulch the plants with compost every May. Place bracken or litter over the crowns each winter to protect from frosts.

Herbs

A few Sage plants should be bought in the spring at not more than 6d. apiece and planted in ordinary soil about 18 in. apart. They will need little attention beyond clipping off straggly growths in late summer. The shoots, of course, are picked off when needed for culinary purposes.

Thyme likes a sunny position and a few cheap plants should be placed about 1 ft. apart in a sunny position.

Mint is one of the most useful herbs. The roots are like couch-grass and a bunch of them, bought for a few pence, can be laid in shallow trenches, drawn about 6 in. apart. A border alongside the path will do for these. Each autumn the dead foliage is chopped down and the surface of the bed dressed with compost or leafmould.

A few roots of Horse Radish planted in an out-of-the-way corner may come in useful. The chief bother with this herb is that it spreads unless kept under strict control.

Chives provide green tops in early summer for salads, being a substitute for Spring Onions. Clumps should be planted in early spring about 6 in. apart. These, like the foregoing, grow freely and plants are cheap.

Of the other herbs, Parsley is about the only one for which there is a general demand. This is obtained by sowing seed every spring and should belong to the less permanent crops of the kitchen garden. It is often sown in a drill alongside the Onion bed, a tradition being that it wards off the Onion fly. If the seedlings are transplanted they will produce the curliest foliage.

Rotational Crops

To all intents and purposes, the maincrops of vegetables are annuals and are raised by sowing seeds in their respective seasons. As stated in the beginning of the chapter, some are decidedly worth growing, but many are not. However, we often have to include the cheaper sorts in order to bring about a rotation. If the same crops are grown year after

year on the same site they deteriorate in quality, through taking their particular form of nourishment from the soil, and diseases spread. Potatoes will contract Eelworm while Cabbages will become addicted to "Finger and Toe."

We must remember that leaf-producing vegetables, such as all members of the Cabbage family, take a lot of nitrogen out of the soil. Peas and Broad Beans use up phosphates, but in return create nitrogen within the soil, leaving it better than it was before. Most of the roots need lots of potash. Therefore, if we plan the vegetable garden so that the changes are rung we get a balanced withdrawal, and we minimise the possibilities of diseases taking hold.

Although we are often given rotations to follow, these are seldom practicable, for we all differ in our preferences for the various vegetables. Furthermore, as we gain experience we find that our soil suits some vegetables better than others, and we naturally concentrate upon those that will flourish. Carrots will grow well in sandy gardens, but are stodgy and ugly in heavy ground. Peas will revel in heavy soil. So will some of the Cabbage family.

If Cabbages are planted to follow Peas, they will reap the benefit of the increased nitrogen content. After the Cabbages have been cleared, it is a good policy to thoroughly dig in plenty of compost or manure, dress with a proprietary fertiliser and plant Early Potatoes. Many such changes can be thought out, taking into consideration a few other factors. The most important of these is to have a plan whereby a large part of the vegetable garden is clear each digging season. Those crops that stay in the ground through winter—like Brussels Sprouts, Kales, Broccolis and Parsnips, should be growing side by side so that the rest of the plot can be thoroughly trenched or dug.

As directions for growing the various crops are invariably given upon the seed packets, there is no need to repeat them here, but it is well to consider their respective merits for inclusion in the small garden.

Broad Beans should be grown in moderation. One small

sowing will give a few enjoyable meals, if the pods are gathered young. Too many of them are sickening.

Dwarf Beans are generally grown to provide young pods before Runners arrive. Only a few of an early variety, such as The Prince, are advisable. Canadian Wonder is a late sort.

A row of Runner Beans is indispensable. If sown in good soil and proper supports be given, they will yield many pickings throughout summer and early autumn.

A small batch of Early Round Beet is appreciated, but the Long varieties are field crops, and easily bought from the greengrocer ready-cooked.

Broccoli are so doubtful that they should seldom be grown. The one exception is Purple Sprouting, a few plants of which will provide the most nourishing food at Easter.

Brussels Sprouts are seldom grown in a small garden as satisfactorily as the market grower produces them. Still, they are worth trying.

A few late Kales are advisable.

Cabbages are always good—in moderation. The early August sowing for the Spring Crop, and another sowing of a winter sort in early June will yield them just when they are wanted. Sowing summer Cabbage in March or April is not advised.

Maincrop Carrots are hardly worth growing. But the sowing of the variety Early Horn in early July, upon ground that has been cleared of early Potatoes or Peas, will yield young juicy roots from autumn until Christmas. These should be pulled as wanted.

Cauliflowers must be sown early in order to have good heads. Perhaps it is best to buy a few plants.

Celery often fails, and needs much attention. It should be avoided by the inexperienced.

Leeks are extremely good. Sow the seeds very early, in the warmest spot, and transplant the seedlings directly room can be found for them in early summer—by the method described in gardening articles. They will stand through winter and provide meals over many months.

Lettuces should be sown little and often. Transplant the early sowing, but only thin those started in summer, in *order to have them almost throughout the year.* Home-grown freshly-gathered Lettuces are far superior to the weary specimens generally sold in shops.

If the garden is well cultivated, Onions are a good crop. But the directions must be seriously heeded, for they can easily be miserable.

Parsnips will grow almost anywhere—if you want them.

Early Peas are glorious. The dwarf marrowfat varieties are better than round-seeded, and nearly as hardy. Successional sowings should be made where there is room. Field Peas, such as are sold in the shops, seldom come up to the standard of the homegrown varieties.

Early Potatoes are always welcome. Do give them a protected position, and do not plant too early. Always get Scotch seed and, if possible, sprout them in trays before planting. Do not plant them more closely than the standard distances, and do attend to such jobs as earthing-up and hoeing before the foliage gets too tall. One of the best varieties for flavour and good cropping is Arran Pilot. Prices for seed are controlled and at the time of writing average 7s. 6d. for 28 lb. Maincrop potatoes are uneconomical.

Savoys are useful if not sown too early. Treat them in the same way as Christmas Cabbages and they will be welcome.

Spinach is an excellent crop—if you like it. It is seldom satisfactory when bought from the shop. Spinach Beet is a good substitute for giving a supply in winter, if sown in early July.

Tomatoes are rather risky things to grow, but the risk is worth taking. Good plants should be bought in late May, and treated according to the advice universally given at that time of the year. It is imperative to attend to them without stint. Failures are most often due to neglect in nipping out the sideshoots, and being careless over sprayings against Blight. The standard varieties are superior to freaks, such as Bush types, or Peach Tomatoes, etc. Good plants cost 6d. each.

Vegetable Marrows are profitable, and are most welcome in the beginning of the season. If there is a site for them they should be grown. An out-of-the-way airy corner, such as by the compost bins, is a suitable place to prepare a bed of manure or rubbish that can be dug into the garden after the crop has been cleared.

In addition to the standard vegetables that have been mentioned there are scores of novelties. These should not be spurned, but it would be unwise to specialise in them if value for money is a criterion. To grow one or two each year is the best policy. Among them are Aubergines, Haricot Beans, Calabresse, Celeriac, Coleworts, Corn Salad, Couve Tronchuda, Ridge Cucumbers, Endive, Garlic, Good King Henry, Sugar Corn, Kohl Rabi, Salsify, Scorzonera, Seakale, Seakale Beet, and Swedes. In this category I would also include Shallots and Turnips.

While it is important to get good seeds, and to choose varieties that will flourish best in a particular garden, the slight differences are hardly perceptible to anyone but an expert. In these days, when seeds are subjected to Government supervision, there are few bad ones about. Many are imported in bulk and divided among the firms, so that one sort can have many names. Too much importance can be attached to these names. Far more important is the cultivation, feeding, spacing, weeding, thinning and transplanting.

Having grown vegetables for the home, and for exhibitions, for many years, I realise that I have not given much information in this chapter. However, it is available everywhere. Catalogues, Articles, Radio Talks and Lectures reiterate the details so frequently that anyone who is interested cannot do other than know the facts. Beginners are inclined to disobey them. Those distances apart may sound preposterous; the advice never to plant Cabbage plants between Potatoes may appear to be a fetish; taking precautions against various ills, rather than waiting until the ills appear may sound troublesome; deep trenching and digging may be considered a whim of the professional; composting and fertilising may be thought a business stunt; this thorough-

ness may look like over-done propaganda. Out of every hundred difficulties that I have been invited to solve, ninety-nine could be attributed to a disregard of such essential principles.

APPENDIX

MONTH BY MONTH REMINDERS

JANUARY

Flowers—Prepare the site for Sweet Peas.

Seeds of Antirrhinums, Lobelias and Begonias can be sown in heated greenhouse.

Shrubs—*Deciduous subjects, such as Deutzias,* Mock Orange Blossom and Lilacs can be drastically pruned—if it is necessary.

Fruit—*Spray the Apple, Pear and Plum trees with a Tar* wash.

Peach shoots should be trained to wires, and afterwards sprayed with a Sulphur wash to prevent Leaf-curl.

Vegetables—Protect Globe Artichokes from frost by placing litter over crowns.

Put pots and boxes over outdoor Rhubarb where early sticks are wanted.

If a greenhouse is available, it is time to sow Indoor Tomatoes and Lettuces. Leeks and Onions can also be sown for planting outdoors later.

FEBRUARY

Flowers—Stir up the Herbaceous Border and get it tidied up before plants begin to grow.

Give the plants in the Rock Garden a dressing of soil around the roots, where it is necessary.

If there is a greenhouse, Chrysanthemum Cuttings can be rooted.

It is the best time of year to repot Aspidistras, Ferns, Geraniums and Fuchsias.

Shrubs—Prune the sorts that grow strongly in summer and bear their flowers at the end of the shoots. The commonest of these is *Buddleia variabilis*. Late flowering varieties of Clematis can be included. But it is too soon for Roses.

Lawn—Complete any Turf-laying. Rake the existing Lawn vigorously, and apply any Grass Foods—as distinct from Lawn Sand.

Fruit—Prune Gooseberries. Finish off the January jobs in the orchard, and repeat the Sulphur spraying of Peach trees.

Vegetables—Sow Parsnips, Peas and Spinach when the soil is workable.

Plant Broad Beans, Garlic and Shallots. Transplant Perennial Herbs.

Autumn-sown Cabbages should be firmed around their roots. Hotbeds can be made with manure and leaves for Early Carrots, Lettuces and Radishes.

In a greenhouse, sow seeds of Brussels Sprouts, Cauliflowers and more Tomatoes.

March

Flowers—Sow Outdoor Sweet Peas, Larkspurs, Clarkia, and the other hardiest annuals.

Plant the earliest batch of Gladioli, and the latest Anemones.

In the greenhouse sow China Asters, Stocks, and suchlike half-hardy annuals. Repot rooted Chrysanthemums.

Transplant seedlings of Antirrhinums, etc., to larger boxes.

Propagate Dahlias from cuttings, keeping them warm.

Shrubs—Prune the shrubs that have finished flowering—such as Winter Jasmine and Witch Hazel.

Start to prune Bedding Roses at the end of the month.

Tie the new shoots of Clematis to the supports. Evergreen Shrubs and Hedges can be planted. It is not too late to Plant Roses.

Lawns—Feeding, sweeping, rolling, mowing and raking are important this month if a good sward is valued.

Fruit—Protect early-flowering Peaches from frosts. Hoe the Strawberry bed and give a general fertiliser.

Vegetables—Sow Onions, Turnips, Spinach, Early Carrots, Broad Beans, Peas, Parsnips, Spinach Beet, and Parsley, where they are to grow.

Sow Brussels Sprouts, Calabresse, Cauliflowers, Leeks, Lettuces and Cabbages, in a nursery bed.

Transplant Autumn-sown Onions. Plant the earliest Potatoes at the end of the month.

Earth-up Early Peas, and give supports.

Remove protective litter from Globe Artichokes and Asparagus.

Sow the maincrop Celery and Celeriac in the greenhouse. Also sow Tomatoes for eventually planting outdoors.

April

Flowers—Plant main batches of Gladioli. If a stock is available from frames and greenhouse, plant in the garden—Sweet Peas, Violas, Pansies, and Early-flowering Chrysanthemums. Nurseries should have plenty for sale.

Sow all sorts of Hardy Annuals if wanted.

Transplant Catmint.

Give supports to flowers in the herbaceous border. Plant Water Lilies at end of month, or in May.

Shrubs—Complete the pruning of Roses. Prune shrubs such as Forsythia after they have finished flowering.

Continue to plant Evergreens.

Fruit—Spray Apples and Pears as a precaution against Scab. Spray Black Currants as a preventative against Big Bud.

Vegetables—Sow Carrots, Parsnips, Spinach, Peas, Beans, Early Beet.

Plant Potatoes, Cauliflowers, Lettuces and Onions.

In a seed bed, sow Cabbages, Broccoli, Kales, Leeks and Lettuces.

Dress the Asparagus bed with Agricultural Salt.

Earthing-up Potatoes, giving supports to Peas and Thinning-out early-sown seedlings should not be overlooked.

May

Flowers—Sow seeds of Canterbury Bells, Sweet Williams, Delphiniums, Lupins and other sorts of biennials and perennials. Wallflowers should be included in these sowings.

Plant out Antirrhinums, and the hardiest of the Summer Bedding Plants during this month, leaving the Half-Hardy Annuals, such as China Asters, till early June.

Plant out old Dahlia tubers.

Clip back the sprawly growths of rock plants that have finished flowering. Aubretias and Arabis are the chief sprawlers.

Shorten the tops of Early-flowering Chrysanthemums to make them bush out.

Shrubs—Clip back Brooms as they go out of flower.

Pick off the seed heads of Azaleas, and Rhododendrons, but do not prune them.

Spray roses to combat pests. Sweet Peas may also be attacked by green flies, unless sprayed.

Fruit—keep a look out for pests and spray when necessary.

Place straw under Strawberry plants, and cover with netting.

Disbud the new growths on Peaches and Nectarines.

Vegetables—Sow Runner Beans, Dwarf Beans, Beet, Peas, Spinach, Lettuce, Sweet Corns, Parsley, Kales, Savoys and Christmas Cabbage.

Plant the last Potatoes. Transplant Onions, Brussels Sprouts, and Cauliflowers that have been raised in the greenhouse and hardened off.

Plant out Tomatoes at the end of the month.

Prepare beds for Vegetable Marrows and sow at end of month.

Transplant Lettuces and Leeks and the other occupants of the nursery when they are ready.

Thin Parsnips, Turnips, Spinach and other earlier sowings.

JUNE

Flowers—Sow seeds of perennials—if a large inexpensive stock is wanted. Hardy Brompton Stocks can be raised for winter-flowering.

Fill all the summer beds with Half-Hardy Annuals. Plant out young Dahlias.

Disbud Sweet Peas, Carnations, Early-flowering Chrysanthemums and Roses if large flowers are wanted. Remove old seed heads to prolong flowering season.

Take cuttings of Violas and Pansies.

Shrubs—Continue to prune shrubs as they go out of flower. But do not remove the new shoots they make.

Clip hedges in showery weather.

Fruit—Strawberries, Raspberries, Gooseberries, Currants and Cherries will be attacked by birds unless netted.

Thin out Peaches, Nectarines, Apples and Pears.

Summer-prune Apples, Pears and Plums.

Watering will be necessary for trees growing against walls.

Vegetables—Sow the last Peas. Also sow Endive, Chicory, Coleworts, and Turnips.

Transplant Cabbages, Brussels Sprouts, Cauliflowers, Broccoli, Savoys, Leeks, Lettuces, Celery, Celeriac, Marrows and Ridge Cucumbers.

Look out for all sorts of pests and deal with them according to advice generally given.

Plant out more Tomatoes, and keep the side-shoots pinched out.

JULY

Flowers—This is the best month to transplant German

Irises. Plant corms of Autumn Crocuses and Colchicums.
Spray Rose bushes against Rust and Mildew.
Layer Carnation if a new stock is wanted.
Continue to disbud Dahlias, Early-flowering Chrysanthemums and Sweet Peas if superior blooms are wanted.
Continue to remove all seed heads of plants to lengthen the flowering season.
Shrubs—Continue to prune shrubs lightly as they go out of flower. Clip Hedges in dull weather. Berberises, Fuchsias, and many other shrubs can be propagated from cuttings at this time of year. They should be inserted in sandy soil in a frame.
Fruit—Take Strawberry Runners. Destroy the oldest bed before insects breed in the straw, and clear up the rubbish on the younger plantations.
Continue to thin the fruits of heavily-laden trees of Apples and Pears.
Complete the thinning of Peaches and Nectarines.
Apples, Pears, and Plums must still be summer-pruned.
Spray Plum Trees attacked by White Aphis.
Vegetables—Continue to transplant Greenstuff and Celery plants.
Sow seeds of Early Carrots, Endive, Lettuces and Spinach.
At the end of the month, sow the earliest Autumn-sown Cabbages.
Water and mulch Runner Beans.
Mulch, feed and disbud Tomatoes.
Collect all spent Pea and Potato haulms, Weeds, and suitable materials, to make Compost Heaps.
Lift Shallots and Garlic and thoroughly dry in sunshine before storing.

AUGUST

Flowers—Plant Daffodils and Madonna Lilies.
Carnations can still be increased by layering.
Cuttings of flowers can be inserted in sand.

Shrubs—Many cuttings can be taken if new stocks are wanted.
Continue to clip Hedges.
Fruit—Summer-pruning of Apples, Pears and Plums *should be continued.*
Insert young Strawberry plants in new beds.
Cut out the old Raspberry Canes directly the crop has finished.
Completely remove old branches of Black Currant Bushes.
Vegetables—Sow the later lot of Autumn-sown Cabbages, Endive, Spinach Beet, Winter Radishes, Turnips, Winter Lettuces and Autumn-sown Onions.
Harvest the mature Autumn-sown Onions, thoroughly ripening them before storage.
It is not too late to transplant the late-maturing Savoys and Winter Cabbage.

SEPTEMBER

Flowers—Plant bulbs of Crocuses, Scillas, Narciss, Hyacinths, Bulbous Irises and Snowdrops.
Transplant Anchusas and Peonies—if it is really necessary.
Where bedding plants have finished, clear them out, thoroughly *prepare the soil, and introduce Wallflowers,* Forget-me-nots and Polyanthuses.
Where there is a greenhouse, sow seeds of Schizanthus.
Shrubs—Cut out the old growths of Rambler Roses and tie *the new shoots in their places.*
Transplant Evergreens.
Lawn—*This* is a good time of year to sow Grass seeds.
Fruit—*This* is a suitable month to root-prune vigorous *Apple and Pear trees that do not bear fruit.*
New Strawberry beds can still be made.
Vegetables—Sow more *Winter Lettuces.*
Harvest Spring Onions and Lift Potatoes directly they are ready.
Transplant previously sown Winter Lettuces and Endive.
Earth-up Celery.

October

Flowers—Completing the filling of the flower beds with Wallflowers, etc., is the chief job of this month. Herbaceous plants that have finished flowering can be lifted, divided and replanted.
Take up Dahlia plants after frost has cut the flowers, slightly dry, and pack away in a frost-proof building.
Plant bulbs or corms of Anemones, Crocuses, more Hyacinths, Lilies of sorts and Grape Hyacinths.
Take off rooted Carnation Layers and plant in a special bed.
Sow Sweet Peas and retain in a cold frame.
Shrubs—Order new requirements and plant directly they arrive.
Fruit—Take cuttings of Currants and Gooseberries. Apply Grease Bands to Apple trees to capture Wingless Moths.
Vegetables—Harvest Maincrop Beet, Carrots, and Potatoes.
Transplant Winter Lettuces and Spring Cabbages.
Remove foliage from Asparagus and dress bed with manure.
Start digging.

November

Flowers—Plant Tulips. Remake Herbaceous Borders.
Lift Gladioli corms, dry, and store away from frosts.
Put protective litter over tender outdoor plants.
Shrubs—This is the chief planting season for all sorts of Shrubs, including Roses.
Fruit—The chief occupation this month is tree planting. Pruning can begin at end of month.
Vegetables—Digging and clearing the garden ought to be done thoroughly this month.
Cut down Mint and dress the bed with compost.

December

Flowers—Plantings can proceed in mild weather.

Shrubs—Deciduous hedges and shrubs can be planted when soil is workable.

Lawns—Turfing can proceed. Have the mower overhauled.

Fruit—Chief jobs are planting trees, completing the winter pruning and spraying with Tar Oil after the last operation. *Or spraying can be left until the New Year.*

Vegetables—Trenching and Digging should be the urgent work.

Note :—The Good Housekeeping Gardening Calendar, compiled by the author, gives a more comprehensive list of Month by Month jobs to be done in all parts of the garden.